ALTO-SHAAM®

quickchiller™

PROCESSING FREEZER/CHILLER/REFRIGERATION SYSTEM

QC2-100
(SHOWN WITH ROLL-IN CART)

QC2-40

Model:

QC2-3
QC2-20
QC2-40
QC2-100
QC2-100 REMOTE

QC2-20

QC2-3

- **INSTALLATION**
- **OPERATION**
- **MAINTENANCE**

ecosmart®

24•7 Your Service Hotline 1-800-558-8744

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www.alto-shaam.com

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Wire Diagrams

Always refer to the wire diagram(s) included with the unit for most current version.

Warranty

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DELIVERY

This Alto-Shaam appliance has been thoroughly tested and inspected to insure only the highest quality unit is provided. Upon receipt, check for any possible shipping damage and report it at once to the delivering carrier. ***See Transportation Damage and Claims section located in this manual.***

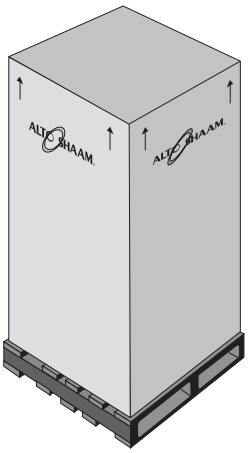
This appliance, complete with unattached items and accessories, may have been delivered in one or more packages. Check to ensure that all standard items and options have been received with each model as ordered.

Save all the information and instructions packed with the appliance. Complete and return the warranty card to the factory as soon as possible to assure prompt service in the event of a warranty parts and labor claim.

This manual must be read and understood by all people using or installing the equipment model. Contact the Alto-Shaam service department if you have any questions concerning installation, operation, or maintenance.

NOTE: All claims for warranty must include the full model number and serial number of the unit.

UNPACKING



1. Carefully remove the appliance from the carton or crate.

   NOTE: Do not discard the carton and other packaging material until you have inspected the unit for hidden damage and tested it for proper operation.

2. Read all instructions in this manual carefully before initiating the installation of this appliance.

   DO NOT DISCARD THIS MANUAL.
   This manual is considered to be part of the appliance and is to be provided to the owner or manager of the business or to the person responsible for training operators. ***Additional manuals are available from the Alto-Shaam service department.***

3. Remove all protective plastic film, packaging materials, and accessories from the appliance before connecting electrical power. Store any accessories in a convenient place for future use.

SAFETY PROCEDURES AND PRECAUTIONS

Knowledge of proper procedures is essential to the safe operation of electrically and/or gas energized equipment. In accordance with generally accepted product safety labeling guidelines for potential hazards, the following signal words and symbols may be used throughout this manual.

DANGER

Used to indicate the presence of a hazard that WILL cause severe personal injury, death, or substantial property damage if the warning included with this symbol is ignored.

WARNING

Used to indicate the presence of a hazard that CAN cause personal injury, possible death, or major property damage if the warning included with this symbol is ignored.

CAUTION

Used to indicate the presence of a hazard that can or will cause minor or moderate personal injury or property damage if the warning included with this symbol is ignored.

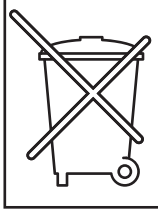
CAUTION

Used to indicate the presence of a hazard that can or will cause minor personal injury, property damage, or a potential unsafe practice if the warning included with this symbol is ignored.

NOTE: Used to notify personnel of installation, operation, or maintenance information that is important but not hazard related.

1. This appliance is intended to chill or freeze foods for the purpose of human consumption. No other use for this appliance is authorized or recommended.
2. This appliance is intended for use in commercial establishments where all operators are familiar with the purpose, limitations, and associated hazards of this appliance. Operating instructions and warnings must be read and understood by all operators and users.
3. Any troubleshooting guides, component views, and parts lists included in this manual are for general reference only and are intended for use by qualified technical personnel.
4. This manual should be considered a permanent part of this appliance. This manual and all supplied instructions, diagrams, schematics, parts lists, notices, and labels must remain with the appliance if the item is sold or moved to another location.

NOTE



For equipment delivered for use in any location regulated by the following directive:

DO NOT DISPOSE OF ELECTRICAL OR ELECTRONIC EQUIPMENT WITH OTHER MUNICIPAL WASTE.

Used to indicate that referral to operating instructions is a mandatory action. If not followed the operator or patient could suffer personal injury.

Used to indicate that referral to operating instructions is recommended to understand operation of equipment.

INSTALLATION

DANGER

IMPROPER INSTALLATION, ALTERATION, ADJUSTMENT, SERVICE, OR MAINTENANCE COULD RESULT IN SEVERE INJURY, DEATH, OR CAUSE PROPERTY DAMAGE.

READ THE INSTALLATION, OPERATING AND MAINTENANCE INSTRUCTIONS THOROUGHLY BEFORE INSTALLING OR SERVICING THIS EQUIPMENT.

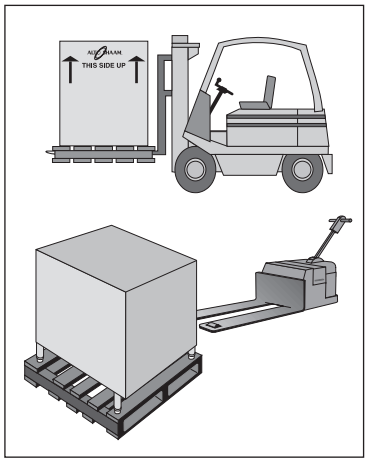
CAUTION

TO PREVENT PERSONAL INJURY, USE CAUTION WHEN MOVING OR LEVELING THIS APPLIANCE.

5-Year Limited Warranty on self-contained compressor
Effective from date of shipment. (EXCLUDES LABOR)

SITE INSTALLATION

Position the Quickchiller to allow sufficient air ventilation through the condensing unit(s).



Avoid installing the chiller immediately adjacent to fryers, charbroilers, or any other equipment producing grease laden air; heat producing equipment such as ovens and ranges; and steam discharging equipment such as steamer ovens and kettles. Do not locate the Quickchiller in direct sunlight.

Allow sufficient front clearance for serviceability and for easy maneuvering of food trolleys in and out of the cabinet.

INSTALLATION

Prior to moving the Quickchiller to the installation site, check the dimensions of doors, passageways, and ceiling heights in the areas through which the cabinet must be moved. Also check the turning radius if the cabinet must be moved around an existing structure. The use of a fork lift or pallet lift truck is required for moving and leveling most Quickchiller models.

NOTE: In certain instances, it may be necessary to remove doors and door hardware to negotiate tight spaces.

CLEARANCE REQUIREMENTS

18" (457mm) MINIMUM CLEARANCE FROM HEAT PRODUCING EQUIPMENT.

INSTALLATION REQUIREMENTS

Unit should NOT be tipped on its side.

If tipped, unit must stand in the upright position for a MINIMUM of 12 hours before operating. Tipping will cause damage to the unit and void the warranty if not allowed to "rest".

— Appliance must be installed level.
— The appliance must not be installed in any area where it may be affected by steam, grease, dripping water, extreme temperatures, or any other severely adverse conditions.

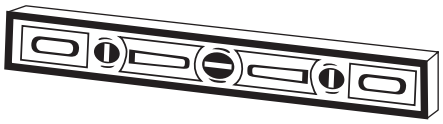
In order to maintain standards established by the National Sanitation Foundation, all counter mounted equipment must use legs that allow for a 4" (102mm) clearance between the cabinet and the counter.

INSTALLATION

SITE INSTALLATION

INSTALLATION REQUIREMENTS

The model QC2-3 is a counter mounted unit and must use legs that allow for a 4" (102mm) clearance between the cabinet and the counter.



For all other models, install the appliance on a smooth and level floor surface. Use the adjustable cabinet legs to level the Quickchiller.

Adjust from front-to-back and from side-to-side with the use of a spirit level to evenly distribute the cabinet weight and avoid pulling the cabinet alignment out of square.

After leveling the cabinet, check that the door handle is aligned properly. Also check the height relationship of the optional roll-in cart to the cabinet. Adjust the Quickchiller height as needed to accommodate the cart and to securely close the Quickchiller door.

DOOR SEAL:

Check the door gasket to make certain it is sealing properly and that the gasket provides an even and positive seal around the entire door frame.

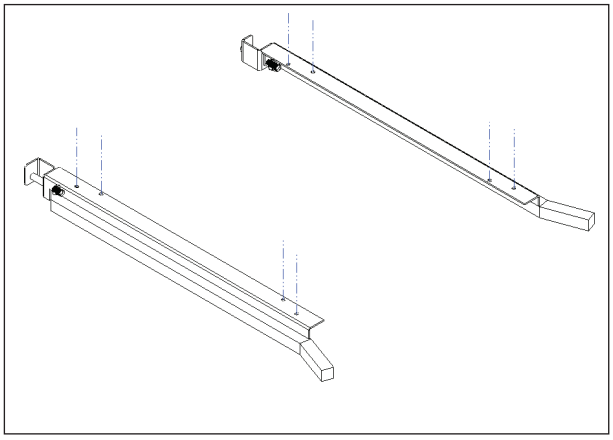
CAUTION

TO PREVENT PERSONAL INJURY, USE CAUTION WHEN MOVING OR LEVELING THIS APPLIANCE.

GUIDE INSTALLATION FOR TROLLEY OPTION ON QC2-100 & QC2-100/REMOTE

Trolley Guide Installation

1. Align each guide rail with the holes located under the cabinet.
2. Fasten each guide rail with washer, lock washer and bolt.
3. Push the roll-in cart (trolley) into the Quickchiller and close the door.
4. At the front of the Quickchiller, make certain contact has been made between the Quickchiller and the cart along the total width of the door to create a complete seal. When a full seal has been determined, recheck each connection to make certain it has been fully tightened.

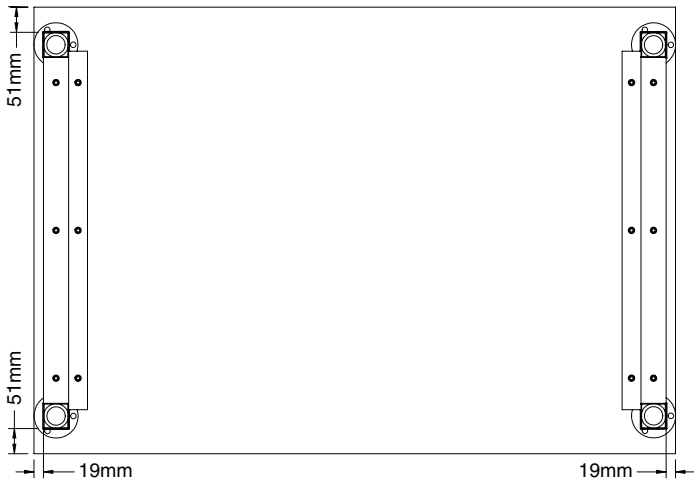


INSTALLATION

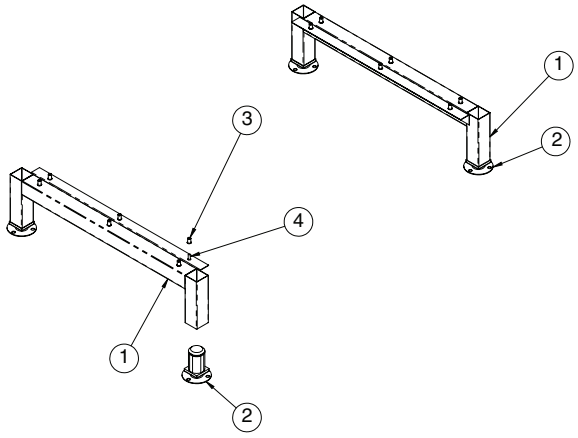
SITE INSTALLATION

LEG INSTALLATION - QC2-100

1. Avoiding trolley guides and drain, carefully lift unit off of floor with forklift just high enough to fit leg assembly ① and tools.
2. Pound feet ② into frame ①.
3. Align frame with holes on the bottom of the unit. Insert screws ④ through nut inserts ③ and attach to frame using a 3/8" socket.
4. Adjust feet accordingly to level the unit.



Item	Part	Description	Qty.
1	5016745	Frame, Legs	2
2	FE-23822	Feet, Adjustable, Flanged	4
3	NU-24613	Nut, Insert 1/4-20	12
4	SC-25286	Screw, 1/4-20 x 3/4" Flanged Head	12



It is recommended that legs be attached to the unit before installing drain assembly.

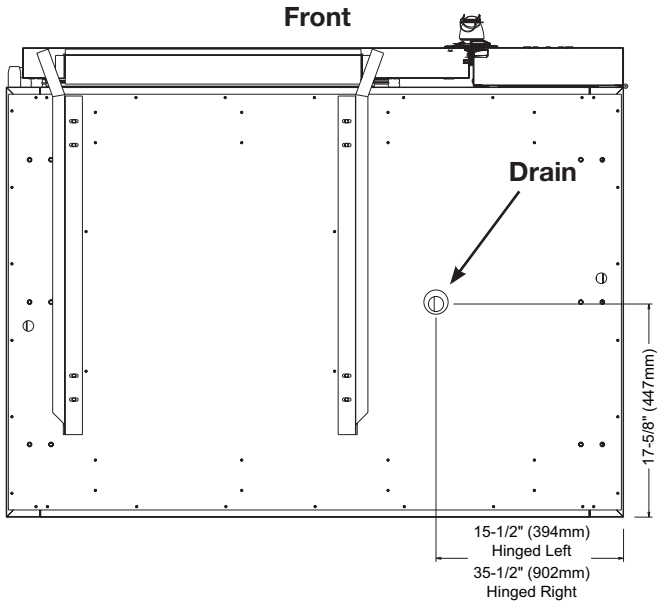
WATER DRAINAGE

A 1" NPS drain is located under the QC2-100. Connect the drain pipe using Teflon tape to discharge through an indirect waste pipe into an open-site drain by means of a 2" (51mm) air gap. Connection must be within 10' (3m) of the unit.

NOTE: In the U.S.A., this equipment is to be installed to comply with the Basic Plumbing Code of the Building Officials and Code Administrators International, Inc. [BOCA], and the Food Service Sanitation Manual of the Food & Drug Administration [FDA].

DRAINAGE		
QC2-3	**QC2-20**	**QC2-40**
EVAPORATOR PAN: NO INSTALLATION REQUIRED		
QC2-100		
ONE (1) FLOOR DRAIN: 1/2" (12,7mm) DIAMETER		

QC2-100 Bottom View



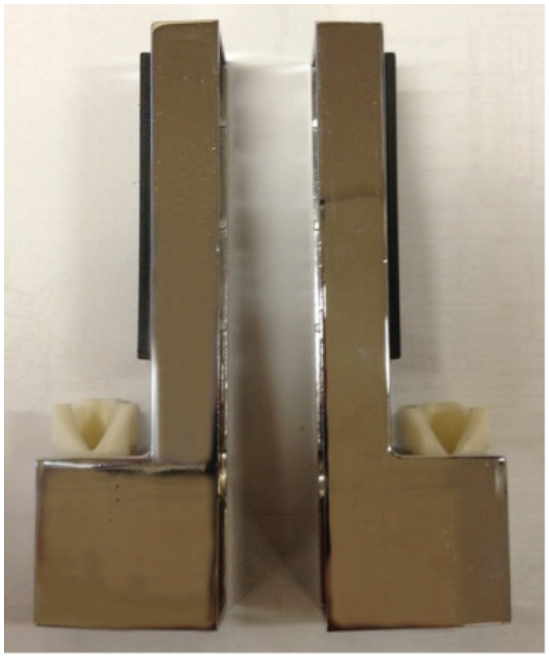
INSTALLATION

SITE INSTALLATION

ADJUSTABLE HINGES

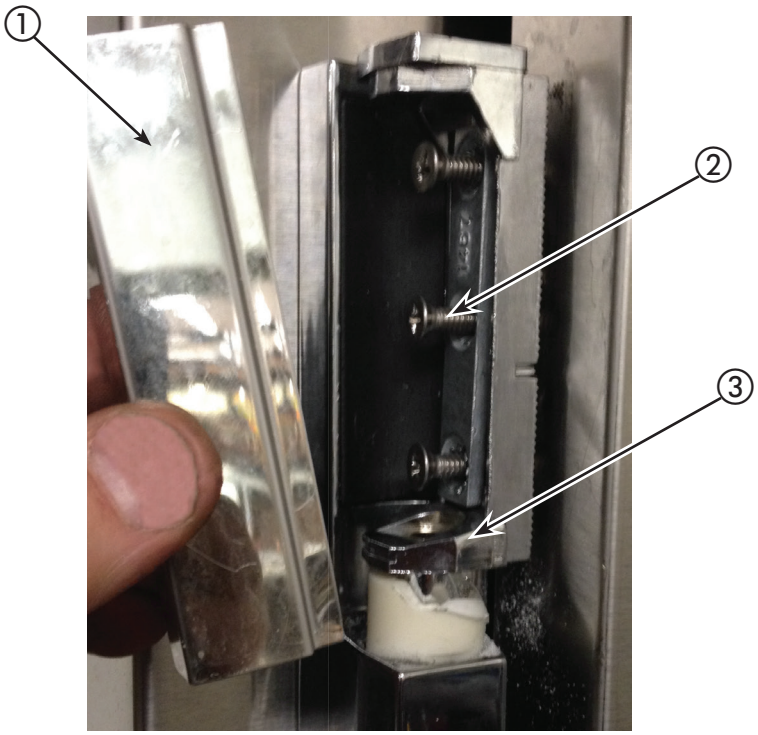
Hinges can be modified for a left or right-hand door.

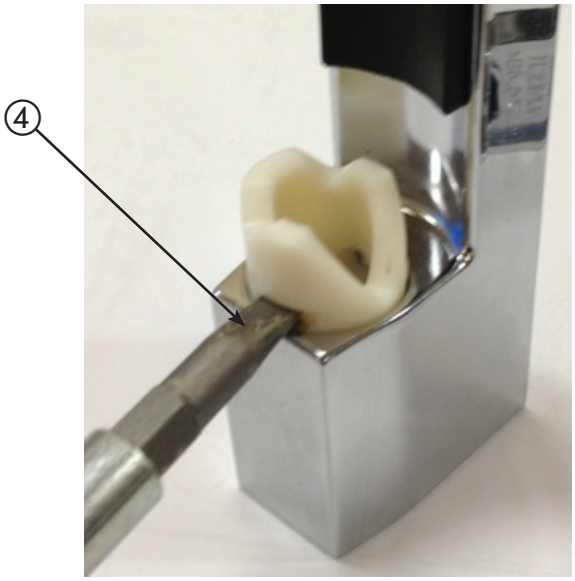
1. Remove hinge cover ①.
2. Remove screws from hinge ②.
3. Remove metal cap ③.
4. Insert flat screwdriver into slot and pry out ④. Rotate cam so that deep grove is positioned to the right for left-hand hinge, or left for right-hand hinge ⑤.
5. Lock metal cap back into place. Replace screws, and hinge cover.



Left-Hand Hinge Position

Right-Hand Hinge Position

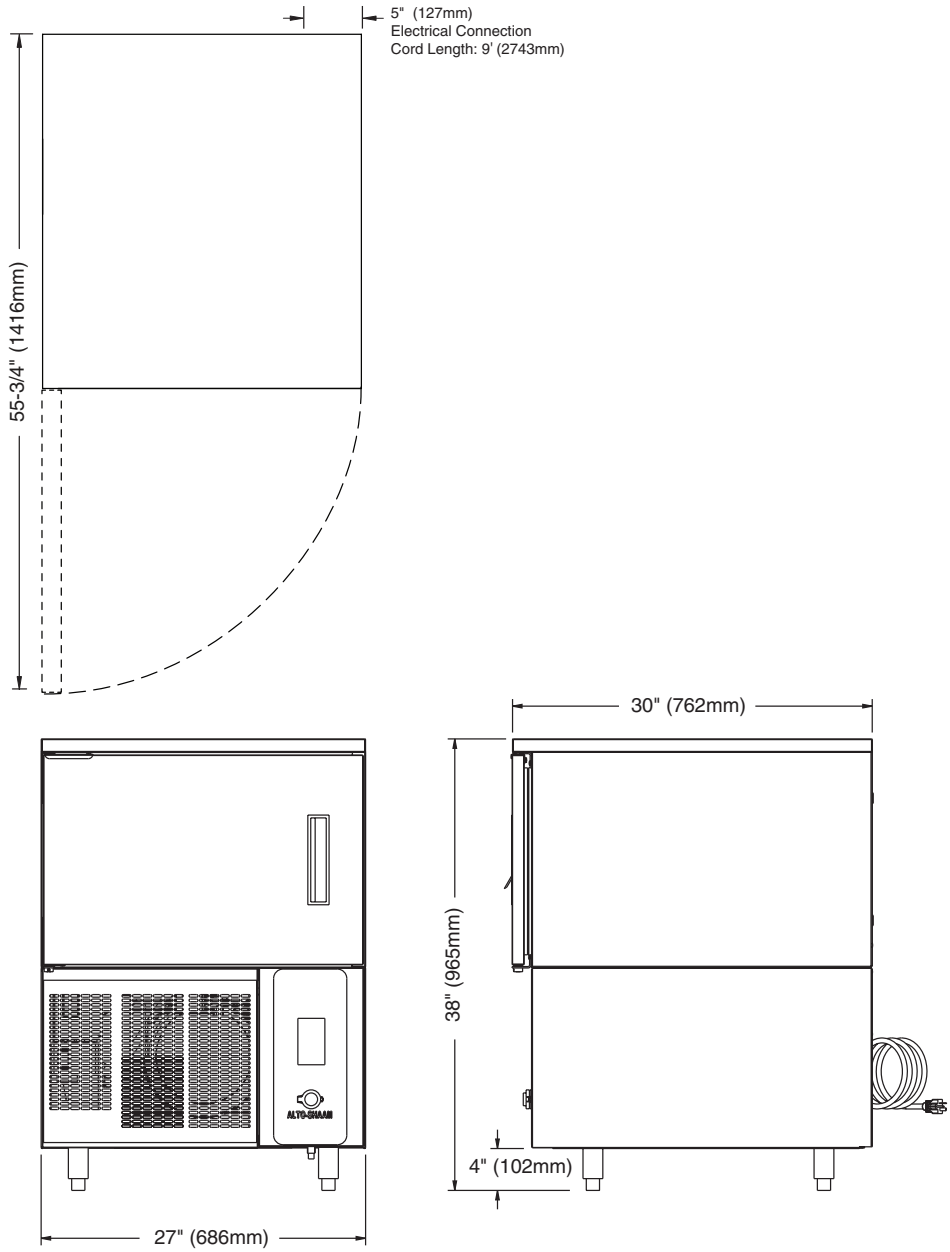




INSTALLATION

SITE INSTALLATION

QC2-3



WEIGHT	
NET: CONTACT FACTORY	SHIP: 330 lb (150 kg)
CARTON DIMENSIONS: (L x W x H)	
35" x 35" x 42" (889mm x 889mm x 1067mm)	

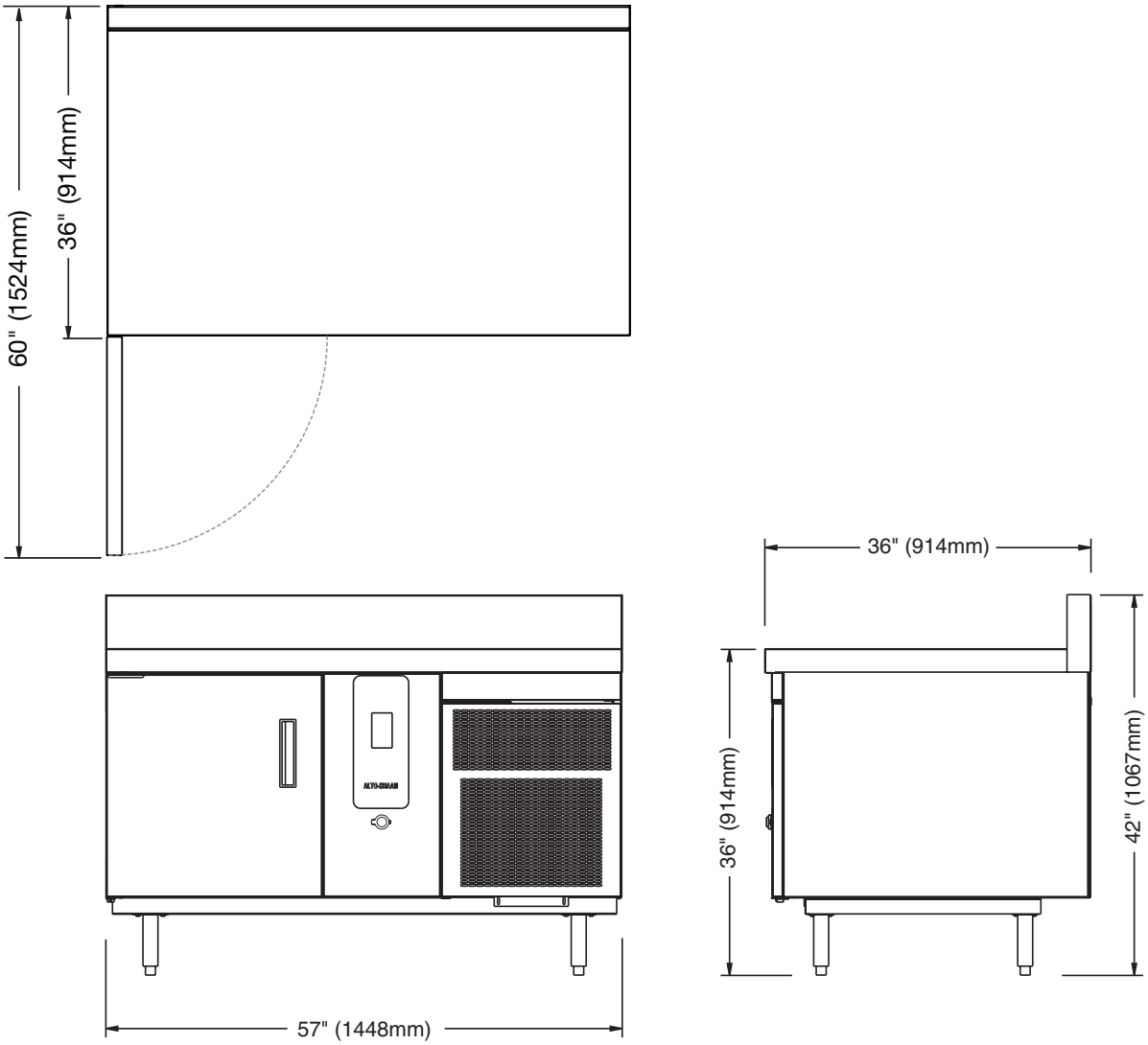
REFRIGERATION
40 oz. R404a Refrigerant
One (1) 1/2 hp Condensing Unit: 2,800 BTU's per hour at -5°F (-21°C) in the freeze mode 4,750 BTU's per hour at +20°F (-7°C) in the chill mode

PRODUCT\PAN CAPACITY		
Approximately 36 lb (16 kg) MAXIMUM		
VOLUME MAXIMUM: 22-1/2 QUARTS (28,5 LITERS)		
	FULL-SIZE PANS:	GASTRONORM 1/1:
Three (3)	20" x 12" x 2-1/2"	(530 x 325 x 65mm)

INSTALLATION

SITE INSTALLATION

QC2-20



WEIGHT	
NET: CONTACT FACTORY	SHIP: 450 lb (204 kg)
CARTON DIMENSIONS: (L x W x H) 60" x 39" x 48-1/2" (1524mm x 991mm x 1232mm)	

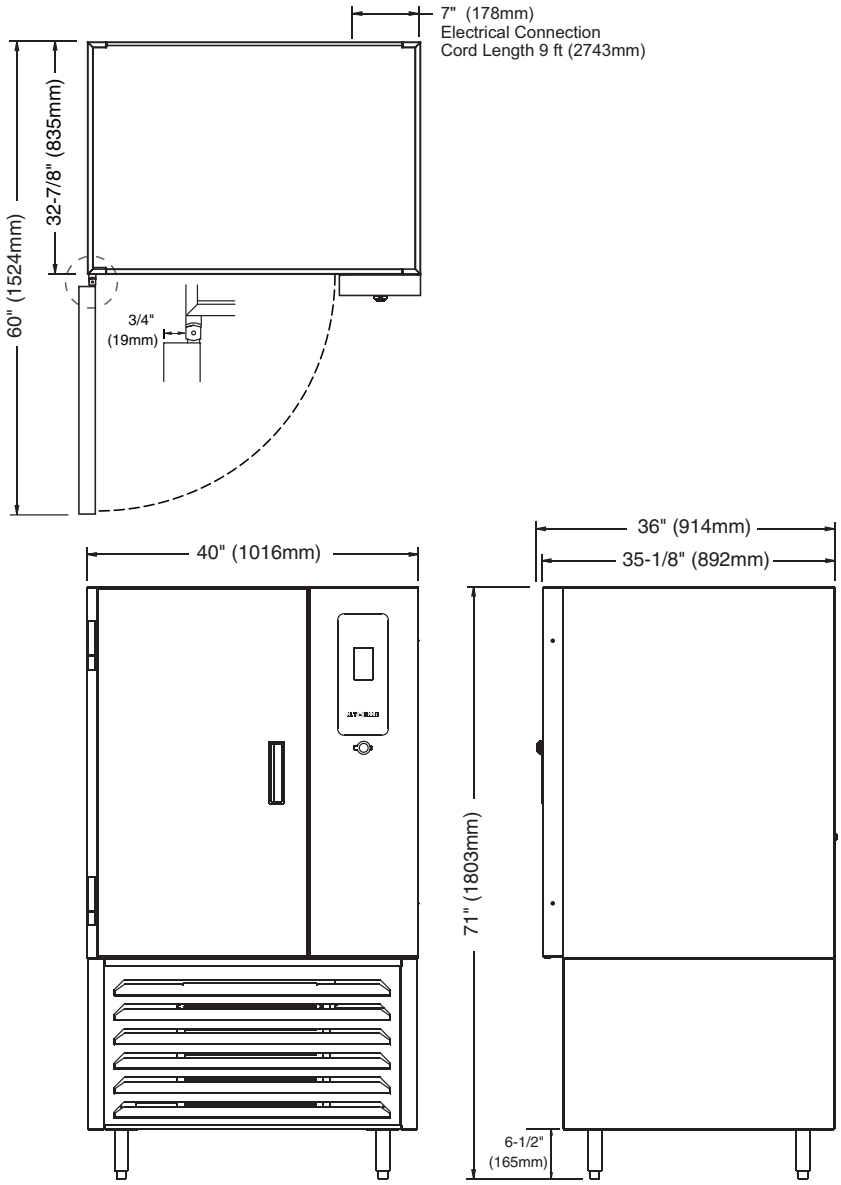
REFRIGERATION
40 oz. R404a Refrigerant
One (1) 3/4 hp Condensing Unit:
FREEZE MODE: 4,380 BTU's per hour at -5°F (-21°C)
CHILL MODE: 7,080 BTU's per hour at +20°F (-7°C)

PRODUCT\PAN CAPACITY		
MAXIMUM CHILLING CAPACITY: Approximately 60 lb (27 kg)		
VOLUME MAXIMUM: 37.5 QUARTS (47,5 LITERS)		
	FULL-SIZE PANS:	GASTRONORM 1/1:
Five (5)	20" x 12" x 2-1/2"	(530 x 325 x 65mm)
	FULL-SIZE SHEET PANS:	
Ten (10)	18" x 26" x 1"	

INSTALLATION

SITE INSTALLATION

QC2-40



WEIGHT (EST.)	
NET: 654 lb (297 kg)	SHIP: 815 lb (370 kg)
CARTON DIMENSIONS: (L x W x H)	
55-1/2" x 45-1/4" x 87" (1410mm x 1149mm x 2210mm)	

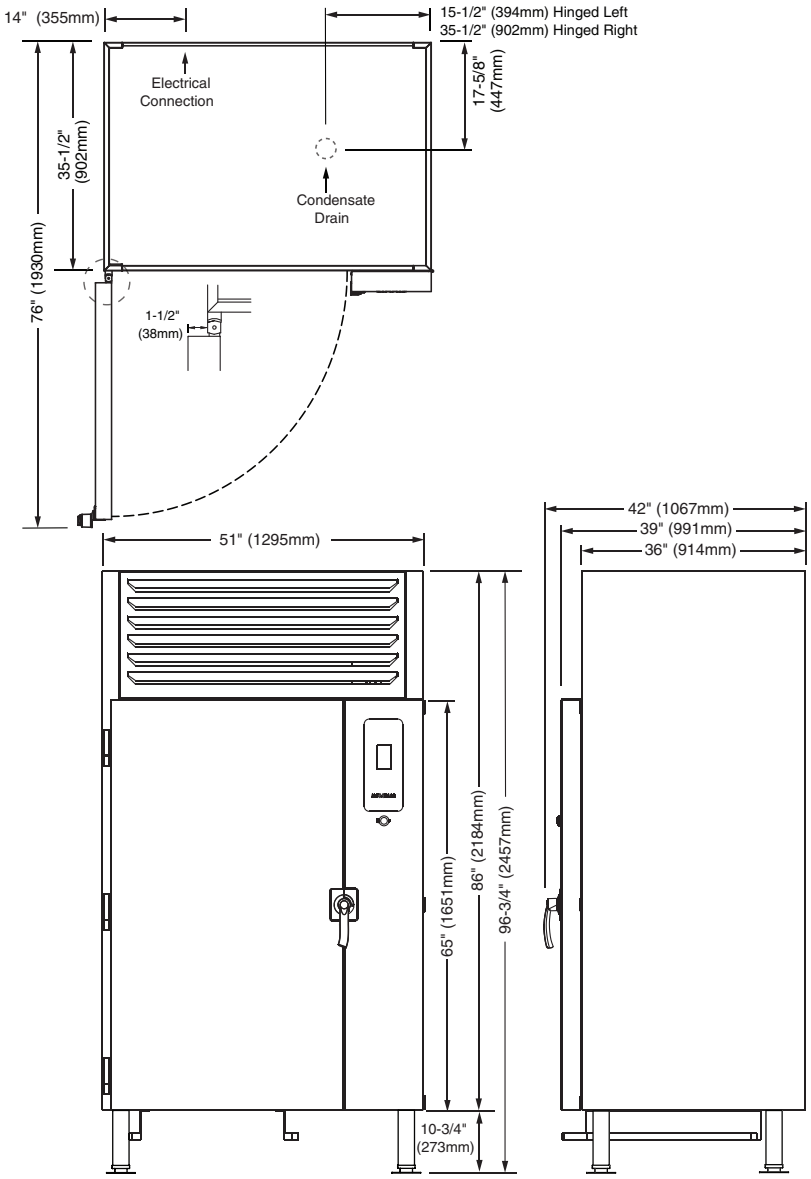
REFRIGERATION
80 oz. R-404a Refrigerant
One (1) 1-1/2 hp Condensing Unit:
FREEZE MODE: 5,880 BTU's per hour at -5°F (-21°C)
CHILL MODE: 11,400 BTU's per hour at +20°F (-7°C)

PRODUCT\PAN CAPACITY		
MAXIMUM COLD HOLDING CAPACITY: Approximately 240 lb (109 kg) MAXIMUM VOLUME MAXIMUM: 150 QUARTS (190 LITERS)		
	FULL-SIZE PANS:	GASTRONORM 1/1:
Twenty (20)	20" x 12" x 2-1/2"	(530 x 325 x 65mm)
	FULL-SIZE SHEET PANS:	
Ten (10)	18" x 26" x 1"	

INSTALLATION

SITE INSTALLATION

QC2-100



WEIGHT (EST.)	
QC2-100 **NET:** 1000 lb (454 kg)	**SHIP:** 1186 lb (538 kg) est
Pan Cart **NET:** 120 lb (54 kg)	**SHIP:** 161 lb (73 kg)
Plate Cart **NET:** CONTACT FACTORY	**SHIP:** CONTACT FACTORY
CARTON DIMENSIONS: (L x W x H)	
57" x 44" x 94" (1448mm x 1118mm x 2388mm)	

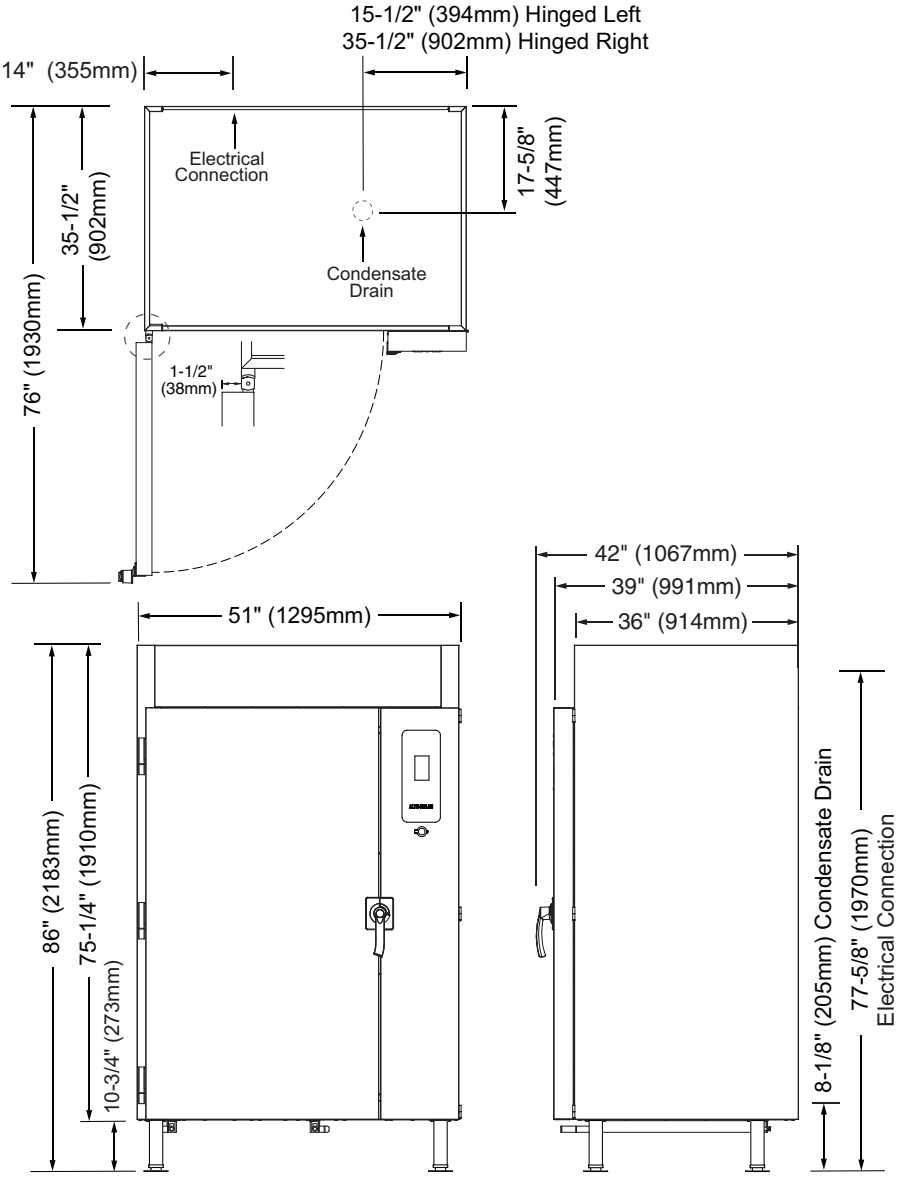
REFRIGERATION
200 oz. R-404a Refrigerant
One (1) 3 hp Condensing Unit: FREEZE MODE: 11,300 BTU's per hour at -5°F (-21°C) CHILL MODE: 21,600 BTU's per hour at +20°F (-7°C)

PRODUCT\PAN CAPACITY		
Maximum Product Capacity Approximately 480 lb (218 kg) MAXIMUM VOLUME MAXIMUM: 300 QUARTS (380 LITERS)		
Maximum Chilling Capacity Approximately 240 lb (109 kg) MAXIMUM VOLUME MAXIMUM: 150 QUARTS (190 LITERS)		
	FULL-SIZE PANS:	GASTRONORM 1/1:
Forty (40)	20" x 12" x 2-1/2"	(530 x 325 x 65mm)
	FULL-SIZE SHEET PANS:	
Twenty (20)* 18" x 26" x 1" on wire shelves only. * Extra optional wire shelves required for maximun capacity shown above.		

INSTALLATION

SITE INSTALLATION

QC2-100R



WEIGHT	
QC2-100R **NET:** CONTACT FACTORY	**SHIP:** CONTACT FACTORY
Pan Cart **NET:** 120 lb (54 kg)	**SHIP:** 161 lb (73 kg)
Plate Cart **NET:** CONTACT FACTORY	**SHIP:** CONTACT FACTORY
CARTON DIMENSIONS: (L x W x H)	
57" x 44" x 93" (1448mm x 1118mm x 2362mm)	

REMOTE BTU REQUIREMENTS
FREEZE MODE: 14,690 BTU's at 90°F AMBIENT
-5°F (-21°C) EVAPORATOR TEMPERATURE

PRODUCT\PAN CAPACITY		
Maximum Product Capacity Approximately 480 lb (218 kg) MAXIMUM VOLUME MAXIMUM: 300 QUARTS (380 LITERS)		
Maximum Chilling Capacity Approximately 240 lb (109 kg) MAXIMUM VOLUME MAXIMUM: 150 QUARTS (190 LITERS)		
	FULL-SIZE PANS:	GASTRONORM 1/1:
Forty (40)	20" x 12" x 2-1/2"	(530 x 325 x 65mm)
FULL-SIZE SHEET PANS: Twenty (20)* 18" x 26" x 1" on wire shelves only. * Extra optional wire shelves required for maximun capacity shown above.		

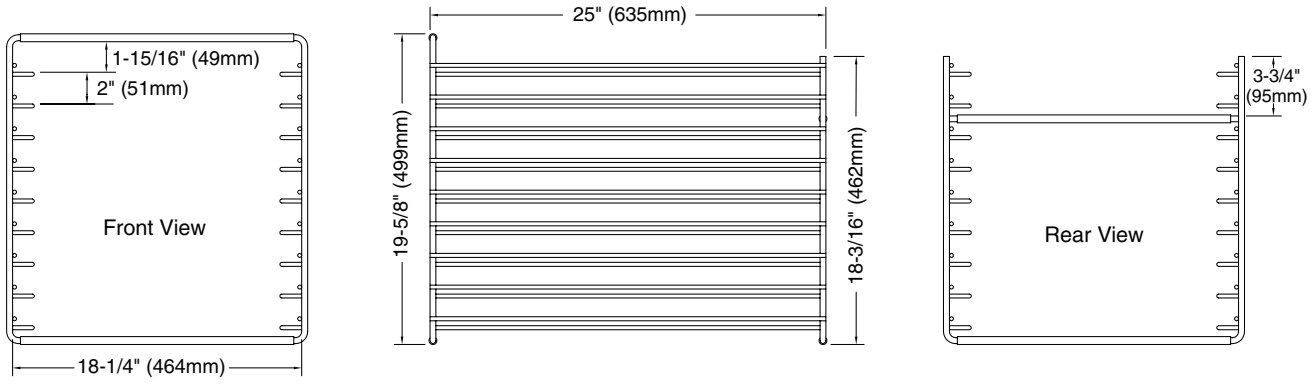
INSTALLATION

OPTIONS AND ACCESSORIES

MODEL >	QC2-3	QC2-20	QC2-40	QC2-100 QC2-100R
Casters, 3" (76mm) [SET OF 4]	5014890	—	—	—
Casters, 5" (127mm) [SET OF 4]	5014751	5014751	5014751	—
Legs, 7" (178mm) for countertop applications [SET OF 4]	5014889	—	—	—
Legs, 9" (229mm) for floor standing applications [SET OF 4]	5014891	—	—	—
Prechill Sealing Strip	—	—	—	SA-35079
Roll-in Pan Cart 20 SHELF PAN TROLLEY - Fits 20-20E, 20-20G, 20-20MW, and QC2-100 69-1/2" x 26-7/8" x 34-1/2" (1766 x 683 x 877mm) 2-9/16" (65mm) VERTICAL SPACING BETWEEN SHELVES	—	—	—	5014652 5017147 (CI)
20 SHELF PAN TROLLEY - Fits 20-10E, 20-10G, 20-20MW, and QC2-100 69-1/2" x 18-3/4" x 29-13/16" (1766 x 475 x 757mm) 2-9/16" (65mm) VERTICAL SPACING BETWEEN SHELVES	—	—	—	5015049 5017149 (CI)
Roll-in Plate Cart 102 PLATE TROLLEY - Fits 20-20E, 20-20G, 20-20MW, and QC2-100 69-5/8" x 26-7/8" x 42-1/2" (1769 x 683 x 1080mm) 3" (77mm) VERTICAL SPACING BETWEEN SHELVES	—	—	—	5016478 5017150 (CI
84 PLATE TROLLEY - Fits 20-20E, 20-20G, 20-20MW, and QC2-100 69-5/8" x 26-7/8" x 42-1/2" (1769 x 683 x 1080mm) 3-11/16" (93mm) VERTICAL SPACING BETWEEN SHELVES	—	—	—	5016480 5017151 (CI)
60 PLATE TROLLEY - Fits 20-10E, 20-10G, 20-20MW, and QC2-100 69-13/16" x 18-3/4" x 37-1/8" (1773 x 475 x 943mm) 2-9/16" (66mm) VERTICAL SPACING BETWEEN SHELVES	—	—	—	5016489 5017153 (CI)
51 PLATE TROLLEY - Fits 20-10E, 20-10G, 20-20MW, and QC2-100 70" x 18-3/4" x 37-1/8" (1778 x 475 x 943mm) 3-1/16" (77mm) VERTICAL SPACING BETWEEN SHELVES	—	—	—	5016490 5017154 (CI)
Wire Shelves, Stainless Steel	—	—	SH-22584	SH-22473
Wire Shelves, Coated	SH-35114	SH-35115	—	—
Side Racks [2 NEEDED] - TEN (10) NON-TILT PAN SLIDES SPACED ON 1.9" (48mm) CENTERS	—	SR-29969	—	—
Side Rack Pin, Long [2 NEEDED]	—	PI-29939	—	—
Side Rack Pin, Short [2 NEEDED]	—	PI-35828	—	—
Side Rack Holder [2 NEEDED]	—	SR-35829	—	—
Stacking Kit, 7•14 over QC2-20	—	5015155	—	—

CI - CORRECTIONAL INSTITUTION

SR-35827 - Slide in Rack, QC2-20 (Standard)



INSTALLATION

ELECTRICAL

This appliance must be branch circuit protected with proper ampacities, in accordance with the wiring diagram. The Quickchiller must be properly grounded in accordance with the National Electrical Code and applicable local codes. Wire size for the main incoming power to the unit must match the minimum size listed in the specifications applicable to the specific Quickchiller model. For supply connections, locate the wire size listed in this manual.

Before operating the chiller, check all cable connections in the electrical connection area for tightness since connections can loosen during transport.

NOTE: After electrical connections have been completed, operate the appliance in any chilling mode for a period of 15 minutes and recheck the main power connections at the terminal block to make certain they remain tight.

DANGER

To avoid electrical shock, this appliance MUST be adequately grounded in accordance with local electrical codes or, in the absence of local codes, with the current edition of the National Electrical Code ANSI/ NFPA No. 70. In Canada, all electrical connections are to be made in accordance with CSA C22.1, Canadian Electrical Code Part 1 or local codes.

⚠ DANGER

ELECTRICAL CONNECTIONS MUST BE MADE BY A QUALIFIED SERVICE TECHNICIAN IN ACCORDANCE WITH APPLICABLE ELECTRICAL CODES.

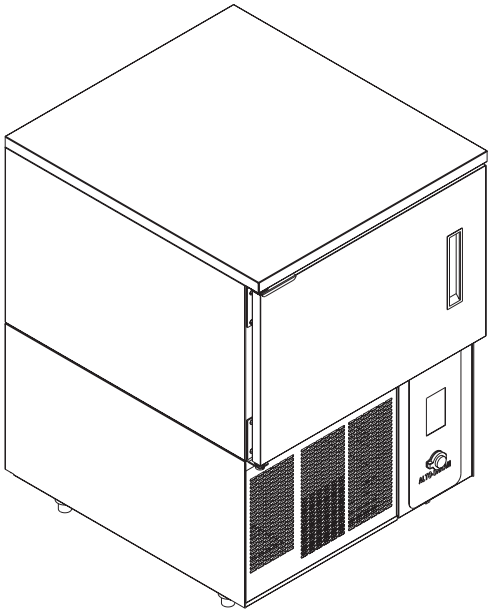
Wire diagrams are located near the top of the unit, close to the compressor or control panel.

ELECTRICAL SPECIFICATIONS

VOLTAGE / PHASE / CYCLE/HZ	QC2-3	QC2-20	QC2-40	QC2-100	QC2-100R REMOTE
115 / 1 ph / 60 Hz RECOMMENDED CIRCUIT AMPERAGE: PLUG CONFIGURATION:	16A, 1.8kW 20 amps NEMA 5-20P	16A, 1.8kW 20 amps NEMA 5-20P	NOT AVAILABLE	NOT AVAILABLE	NOT AVAILABLE
115/208-230 / 1 ph / 60 Hz RECOMMENDED CIRCUIT AMPERAGE: PLUG CONFIGURATION:	NOT AVAILABLE	NOT AVAILABLE	16A, 3.7kW 20 amps NEMA 14-20P	24A, 5.5kW 30 amps 4 wire direct	20A, 4.6kW 30 amps 4 wire direct
115/208-230 / 3 ph / 60 Hz RECOMMENDED CIRCUIT AMPERAGE: RECOMMENDED WIRE SIZE:	NOT AVAILABLE	NOT AVAILABLE	NOT AVAILABLE	16A, 3.7kW 20 amps 5 wire direct	NOT AVAILABLE
220 / 1 ph / 50 Hz RECOMMENDED CIRCUIT AMPERAGE: RECOMMENDED WIRE SIZE:	NOT AVAILABLE	14A, 1.8kW 20 amps 3 wire direct	20A, 4.4kW 30 amps 5 wire direct	20A, 4.4kW 30 amps 3 wire direct	16A, 3.5kW 20 amps 3 wire direct
380-420 / 3 ph / 50 Hz RECOMMENDED CIRCUIT AMPERAGE: RECOMMENDED WIRE SIZE:	NOT AVAILABLE	NOT AVAILABLE	10A, 3.8kW 20 amps 5 wire direct	12A, 4.6kW 20 amps 5 wire direct	7A, 2.7kW 15 amps 5 wire direct

OPERATION

OPERATING INTRODUCTION



The Alto-Shaam® Quickchiller™ is a processing refrigeration system designed to rapidly and uniformly decrease the temperature of hot foods to either a chilled or frozen state. This process provides enhanced safety, longer storage life and better production efficiency.

Rapid reduction in the temperature of hot foods inhibits the growth of bacteria and provides a safe, five-day chilled food refrigerated storage period from the time of preparation to the time of service. Enhanced storage time offers the food service operation considerable production efficiency. As an example, a daily menu item can be reduced from daily preparation to a preparation schedule consisting of two days per week.

The Alto-Shaam Quickchiller can be effectively utilized in several types of food service programs:

1. TRADITIONAL COOK-SERVE KITCHENS —

Quick chilling can be used to help streamline production in operations where foods are prepared for immediate service. Preparation of labor intensive entrées can be scheduled for production several days before service. Chilling foods provides the ability to rethermalize these items at a later date while maintaining both safety and product quality.

2. MODIFIED COOK-CHILL OPERATIONS—

where a significant portion of food is cooked for immediate service and a smaller portion of more labor intensive, hot food items are prepared in advance, chilled and reheated when required for service.

3. FULL COOK-CHILL OPERATIONS —

where all hot food production is prepared in advance of service requirements and held in refrigerated prepared food inventories. Hot food preparation takes place over a five-day production schedule.

The Quickchiller cooling or freezing process is accomplished with the utilization of large compressors and fans that are electronically controlled through the parameters entered by the operator on the control panel located at the front of the cabinet. The Quickchiller provides the operator with the ability to chill food products to a set cavity temperature by time or by internal product temperature using one or more food probes. When the specified chill time has elapsed or the probe temperature(s) has been reached the Quickchiller will convert to a holding mode at a temperature specified for either refrigeration or frozen product maintenance. The Quickchiller control maintains a record of the length operating time used for each current cycle. After the chill cycle has ended and the unit is maintaining a holding temperature mode, the chiller control will initiate an automatic defrost cycle when required.

OPERATION

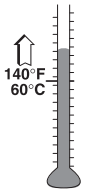
CHILL PROCESSING CYCLES

The Alto-Shaam Quickchiller uses high velocity cold air circulation to remove heat from prepared foods for the purpose of rapidly reducing temperatures through the danger zone and providing maximum storage life. Cold air is evenly directed across each pan from the control side of every Quickchiller model to assure rapid cooling.

The high velocity cold air produced by the Quickchiller removes insulating layers of warm moist air that surrounds hot products. The rapid removal of these insulating layers of heat reduces food temperatures significantly faster than any other method of temperature reduction and provides enhanced food safety.

Because the basic performance of the Quickchiller relies on high velocity air movement around each container of food, it is important to load the food by placing pans directly into the pan slides. Always use the pan slides to support the edges of 12" x 20" steam table pans (GN 1/1). Use a wire shelf for pan support when using 18" x 26" sheet pans; 12" x 10" steam table pans (GN 1/2); loaf pans; entree plates; and other small containers.

CAUTION



TO MAINTAIN SANITATION CONTROL, ALL FOODS FOR QUICK-CHILL OR QUICK-FREEZE PROCESSING MUST BE AT A TEMPERATURE ABOVE 140°F (60°C) AND MUST BE TIGHTLY COVERED.

QUICKCHILLER OPERATION MODES

➤ PROCESSING WITH THE USE OF PROBES

Probe usage provides chill or frozen food processing activation and termination through use of a food probe or probes inserted into the center of the food. The cycle is automatically terminated when the center of the food reaches the probe sensing temperature set by the operator. In units with multiple probes, all probes much reach the sensing temperature set by the operator to trigger automatic termination of the cycle.

➤ PROCESSING BY TIME

The time mode provides processing activation and termination based on a timed cycle selected by the operator. Upon expiration of the timed cycle, the cabinet automatically reverts to the designated holding cycle temperature.

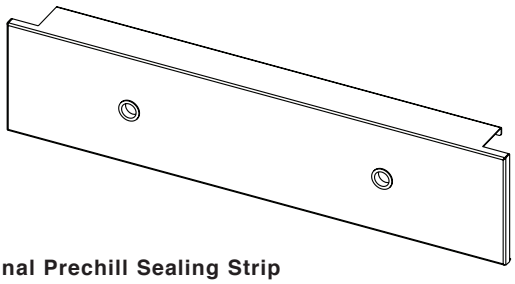
➤ HOLDING

Following processing completion, a holding cycle maintains the temperature to safely hold foods after processing. The holding cycle will also maintain a holding compartment temperature between processing cycles.

INITIAL QUICKCHILLER OPERATION

PRECHILLING THE CABINET

The Quickchiller should be prechilled prior to placing hot foods into the cabinet. In models equipped with an optional roll-in cart (trolley), always maintain an empty food cart inside the chiller when prechilling to eliminate air loss through the bottom of the chiller cabinet door. An optional ***Prechill Sealing Strip (Item #SA-35079)*** may also be used for this purpose.



Optional Prechill Sealing Strip
SA-35079

OPERATION

ADDITIONAL INFORMATION

- Clean the Quickchiller and probes prior to use and make certain all processing modes are operating properly before chilling or freezing foods.
- To maintain proper operation of the Quickchiller, allow the unit to defrost every 4-10 hours.
- For optimum performance, allow the Quickchiller to prechill for a minimum of 30 minutes before loading pans of food.
- Never overload the Quickchiller.
- It is important to be familiar with and adhere to all local food codes.
- Cook foods properly in preparation for blast chilling or freezing.
- Foods should be portioned into shallow pans to a depth not to exceed 2-inches (51mm).
- Pans must be covered prior to the chilling or freezing process to prevent food from drying out.
- Always follow the recommended shelf life for chilled food products. Hold chilled foods under refrigeration for a maximum of 5 days including the day of production and the day of consumption.
- According to U.S. food code regulations, all chilled products must be reheated to an internal temperature of 165°F (74°C) prior to serving.

DOOR

If the QC2-40 or QC2-100 door is opened during any running chill or freeze cycle, the fans will disengage, and a "**DOOR IS OPEN**" message will appear on the screen. If the door is open for longer than 2 minutes, a beeper will sound. When the door is closed, the fans will reengage and the chiller will resume operation.

FAN OPERATION

During the initial cooling of the Quickchiller, an evaporator fan delay system will prevent the chilling fans from engaging until the evaporator coil temperature is below 30°F (-1°C). The fans will continue to run until the evaporator coil temperature is above 60°F (16°C).

DEFROST

The Quickchiller will trigger an automatic defrost cycle if the defrost period has timed out, and unit is in Hold mode, has transitioned from Chill to Hold mode, or is in Chill mode and defrost is more than 1 hour overdue and all probes are below 35°F (2°C). If defrost if more than 1 hour overdue, but probes are above 35°F (2°C), the display will indicate an **E-77** error code and the control will produce an audible signal every ten seconds until a defrost is conducted.

CAUTION

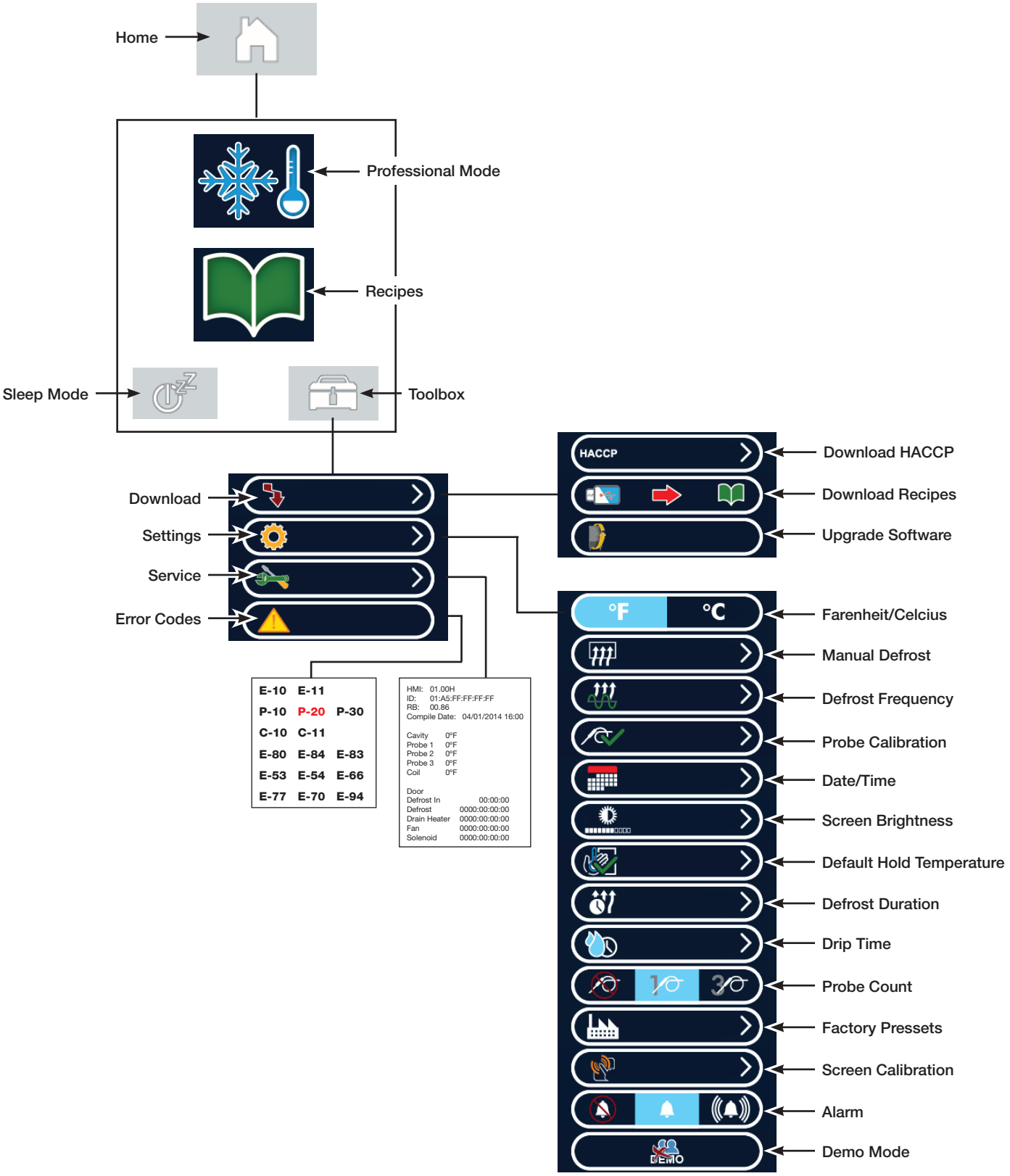
NEVER STACK PANS DIRECTLY ON TOP OF EACH OTHER. STACKED PANS WILL RESTRICT AIR FLOW AND INCREASE CHILL PROCESSING TIME.

CAUTION

ADEQUATE SPACING MUST BE ALLOWED BETWEEN PANS FOR PROPER AIR CIRCULATION FOR BOTH PROCESSING AND SUBSEQUENT HOLDING.

OPERATION

TOUCH SCREEN MENUS



OPERATION

OPERATING INSTRUCTIONS

Chill using preset Recipes

1. Touch to view recipes.
2. Touch or to move between recipe screens.
3. Select desired recipe.
4. Touch to start chill cycle.

The screen will indicate:

- **Chill Time -** The length of time the chiller is operating in the preset mode.

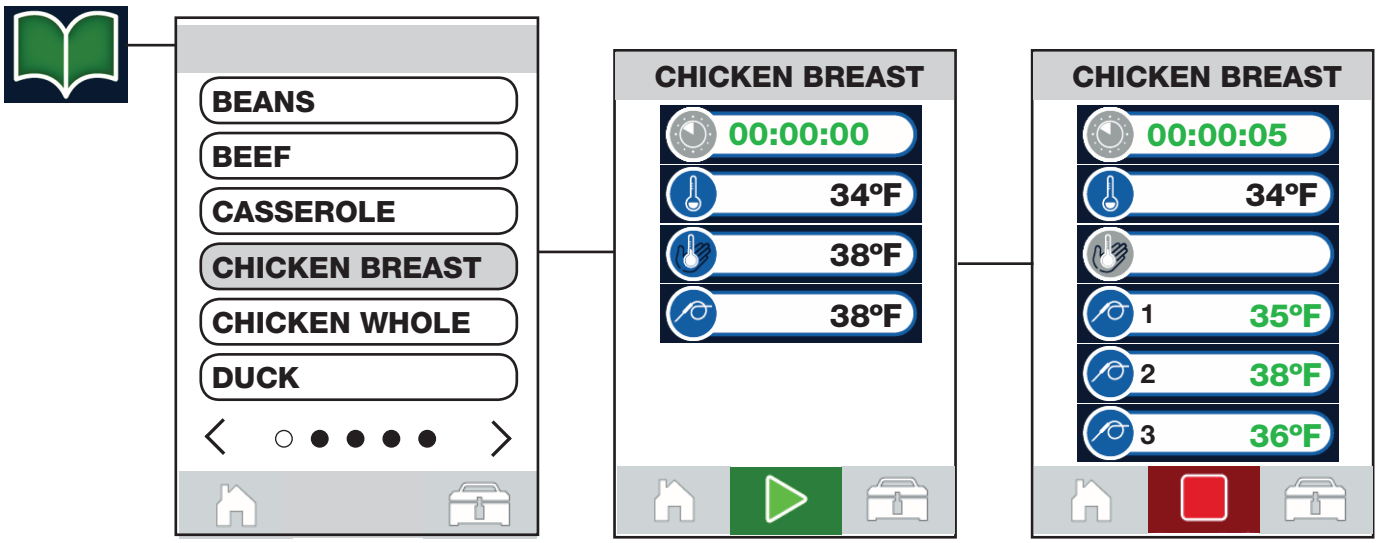
- **Chill Temperature -** The preset temperature.

- **Hold Temperature -** The air temperature inside the chiller compartment when in Hold cycle. Will not display until chiller goes into Hold cycle.

- **Probe Temperature -** The temperature of all food probes.

Touch at any time to stop chill cycle.

Quickchiller >		Default Set Points		
Preset Recipes	**Mode**	**Chill**	**Probe**	**Hold**
1. Beans	Hard Chill	14°F	38°F	38°F
2. Beef	Hard Chill	14°F	38°F	38°F
3. Casserole	Hard Chill	14°F	38°F	38°F
4. Chicken Breast	Soft Chill	34°F	38°F	38°F
5. Chicken Whole	Hard Chill	14°F	38°F	38°F
6. Duck	Hard Chill	14°F	38°F	38°F
7. Fish	Soft Chill	34°F	38°F	38°F
8. Ground Meat	Hard Chill	14°F	38°F	38°F
9. Lamb	Hard Chill	14°F	38°F	38°F
10. Lasagna	Hard Chill	14°F	38°F	38°F
11. Pork	Hard Chill	14°F	38°F	38°F
12. Potatoes	Hard Chill	14°F	38°F	38°F
13. Rice	Hard Chill	14°F	38°F	38°F
14. Sauce	Hard Chill	14°F	38°F	38°F
15. Sheet Cake	Soft Chill	34°F @ 10 min.	—	38°F
16. Soup	Hard Chill	14°F	38°F	38°F
17. Stew	Hard Chill	14°F	38°F	38°F
18. Stuffing	Hard Chill	14°F	38°F	38°F
19. Turkey	Hard Chill	14°F	38°F	38°F
20. Vegetables	Soft Chill	34°F	38°F	38°F



CHILL MODES

SOFT CHILL ... To rapidly decrease the temperature of foods by internal product probe temperature or time within a range of 24°F to 36°F (-4°C to 2°C). Soft Chill is recommended for less dense food items that chill quickly. The mode automatically converts to a refrigerated holding temperature at the end of the chill cycle.

Use **Soft Chill** for less dense items such as fish or vegetables.

HARD CHILL ... To rapidly decrease the temperature of foods by internal product probe temperature or time within a range of 11°F to 23°F (-11°C to -5°C). Hard Chill is recommended for more dense food items. The mode automatically converts to refrigerated holding temperature at the end of the chill cycle.

Use **Hard Chill** for items such as meats or casseroles.

QUICK FREEZE ... The mode for rapid freezing and frozen food maintenance by internal product probe temperature or time within a temperature range of -10°F to +10°F (-23°C to -12°C). The mode automatically converts to a frozen food holding temperature at the end of the quick freeze cycle.

Use **Quick Freeze** to freeze items and transfer them directly to your freezer.

HOLD TEMP ... The mode for refrigerated storage within a temperature range of -5°F to +40°F (-21°C to +4°C). Hold Temp offers continuous refrigerated storage without the utilization of food probes or a timer. Hold Temp always defaults to the default hold temperature, found under the User Settings.

Use **Hold Temp** to hold chilled items at a refrigerated temperature.

OPERATION

OPERATING INSTRUCTIONS

Professional Mode - Chill Mode

Touch on Home screen.

1. Choose desired Chill mode
2. Touch to Chill by Time, or to Chill by Probe.
4. Enter desired Chill time or Probe temperature on number pad, or touch to select factory default.
5. Touch to enter or to retun to settings screen.
6. Touch to adjust Temperature, and to adjust Hold Temperature. Note: Temperatures displayed are the last used settings.
7. Enter desired time or temperature on number pad, or touch to select factory default.
8. Touch to enter or to retun to settings screen.
9. Touch to start the chilling process.

The screen will indicate:

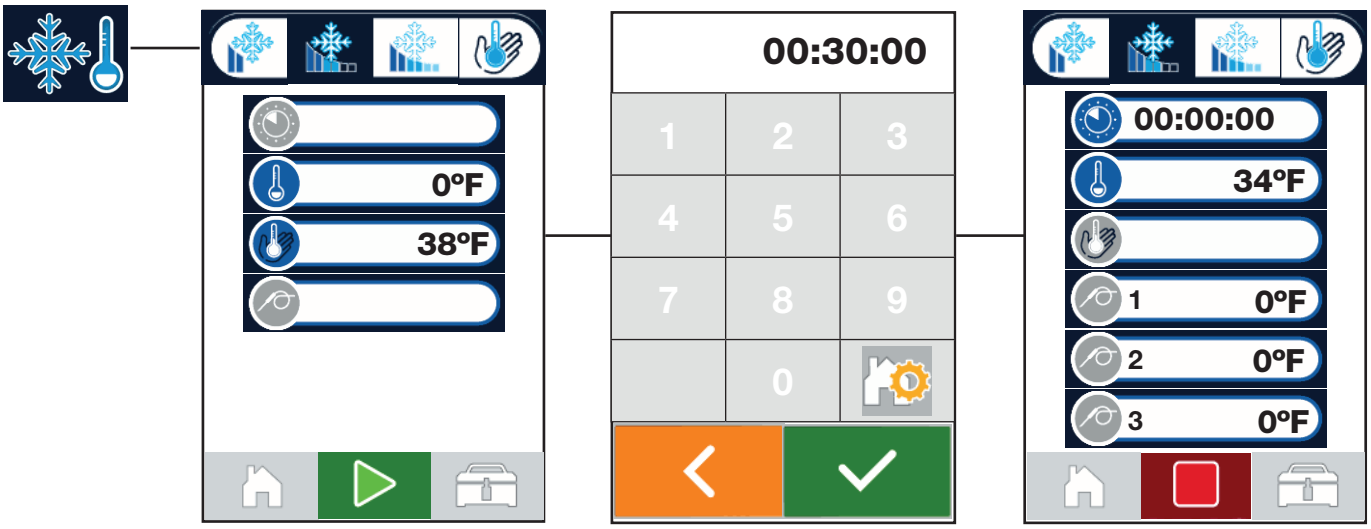
- Chill Time - The length of time the chiller is operating in the preset mode.

- Chill Temperature - The preset temperature.

- Hold Temperature - The air temperature inside the chiller compartment when in Hold cycle. Will not display until chiller goes into Hold cycle.

- Probe Temperature - The temperature of all food probes.

Touch at any time to stop chill cycle.



OPERATION

OPERATING INSTRUCTIONS

Professional Mode - Hold Mode

Touch on Home screen.

1. Touch Hold
2. Enter Hold temperature on number pad, or touch to select factory default.
3. Touch to retun to settings screen, or touch to start the Hold cycle.

The screen will indicate:

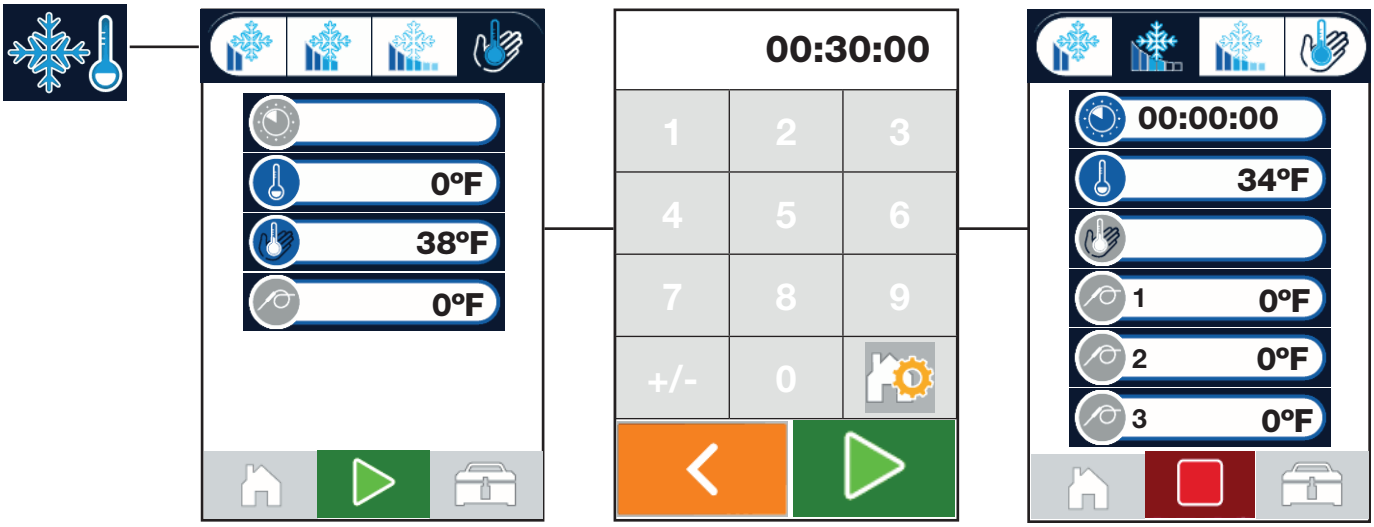
- Chill Time - The length of time the chiller is operating in the preset mode.

- Chill Temperature - The preset temperature.

- Hold Temperature - The air temperature inside the chiller compartment when in Hold cycle. Will not display until chiller goes into Hold cycle.

- Probe Temperature - The temperature of all food probes.

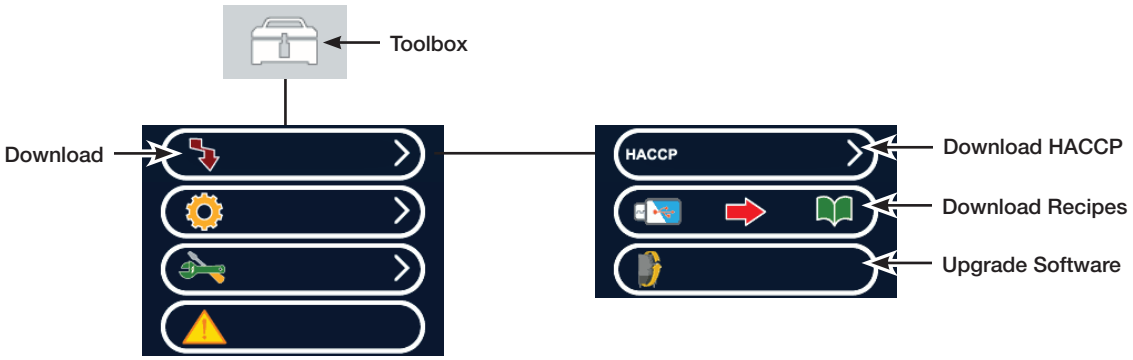
Touch at any time to stop Hold cycle.



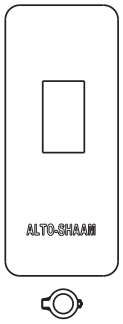
OPERATION

OPERATING INSTRUCTIONS

Downloads



HACCP



USB Data Port

1. Insert USB data stick into data port on front of the unit.
2. Touch and then HACCP. Screen will show the HACCP file that is being copied and will display any errors that occure while the file is downloading. When "Done" is displayed, transfer is complete. Pull the data stick out of the data port. **Note:** If USB is not found when download icon is touched a "No USB detected" message will display on the screen.

All data has been transferred to the USB stick and is erased from the control. A folder called "haccp" is created on the USB data stick containing dated excel file names for each chilling mode or defrost cycle since the last HACCP download. A new file will be created each time a new chill cycle is started. Note: HACCP cannot be downloaded when QC2 is in chill mode.

Sample of Excel Data File - Chill Mode

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	HMI:	01.00AI													
2	RB:		0.86												
3	ID:	0A:51:FF:FF:FF:FF													
4	Chill Mode:	HOLD													
5	Chill Style:	Hold													
6															
7	Date	Time	Mode	Door	Setpoint (°F)	Cavity Temperature (°F)	Probe 1 (°F)	Probe 2 (°F)	Probe 3 (°F)	Setpoint (°C)	Cavity Temperature (°C)	Probe 1 (°C)	Probe 2 (°C)	Probe 3 (°C)	Communication
8	1/15/13	13:55:58	HOLD	0	38	32	32	32	32	3	0	0	0	0	OK!
9	1/15/13	13:55:58	HOLD	0	38	32	32	32	32	3	0	0	0	0	OK!
10	1/15/13	13:56:58	HOLD	0	38	40	37	32	32	3	4	3	3	3	OK!
11	1/15/13	13:57:58	HOLD	0	38	30	32	32	32	3	-1	0	0	0	OK!

Downloads (CONTINUED)

Download Recipes

1. Insert USB data stick into data port on front of the unit.
2. Touch and then .
3. Display will indicate that a download is in process. When complete, pull the data stick out of the data port. Screen will return to Home screen.

Note: Download cannot be done when QC2 is in chill mode.

Software Upgrade

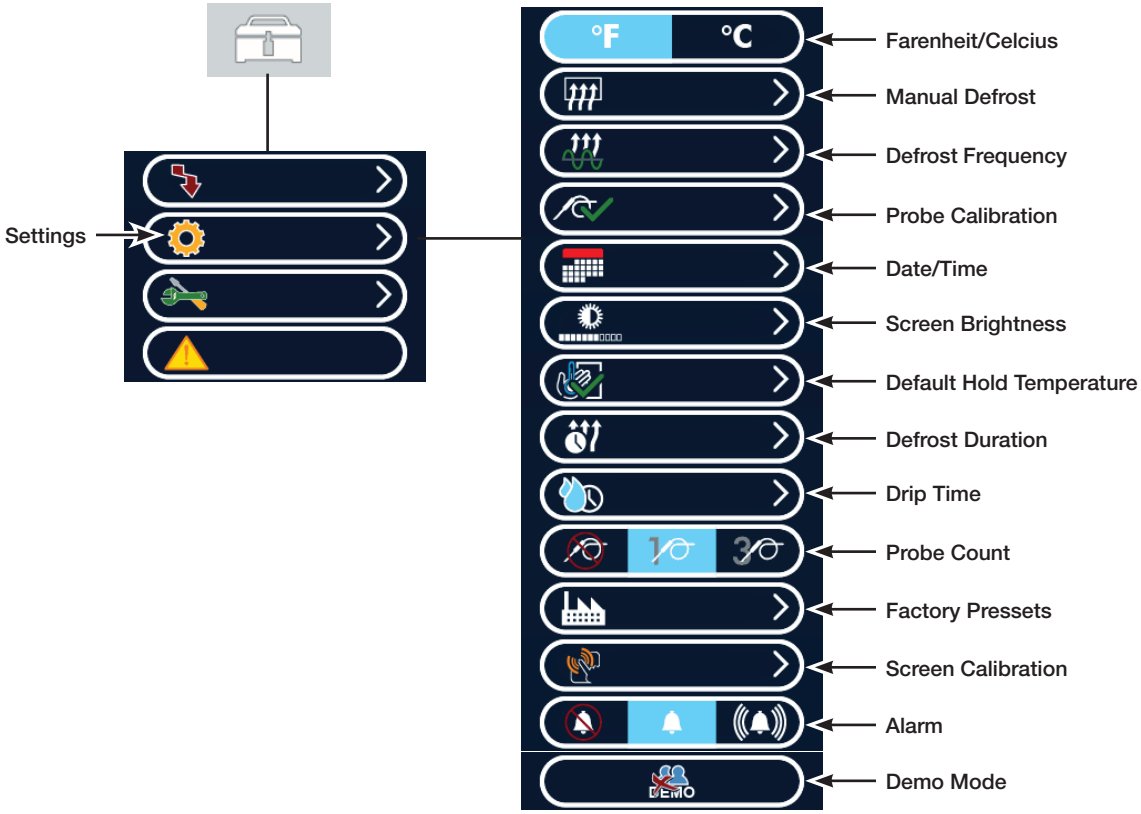
1. Insert USB data stick into data port on front of the unit.
2. Touch and then . Display will indicate that an upgrade is in process. When complete, pull the data stick out of the data port. Screen will return to Home screen.

Note: Upgrade cannot be done when QC2 is in chill mode.

OPERATION

OPERATING INSTRUCTIONS

Settings



ºF/ºC - Touch to choose Farenheit or Celcius for Quickchiller screen readings.

Manual defrost - Touch to begin defrost cycle. Screen will display defrost duration and drip time. The defrost cycle will complete when the temperature of the coil or coils reach set-point values or after a user set period has been reached, whichever occurs first.

Defrost frequency - Touch . Screen will indicate the lenght of time necessary to accrue befor the Fan Timer triggers an automatic defrost cycle. The length of time can be adjusted by touching or to adjust defrost cycle time.

Probe calibration - Touch . The offset and the temperature will display for probe 1 (top), 2 (middle), and 3 (bottom). Use or to set desired probe temperature(s).

Time/Date - Touch and use or to set desired date (MM/DD/YY) and time (HH:MM).

Screen brightness - Touch and use or to adjust screen brightness.

Press or to access additional settings screens.

OPERATION

OPERATING INSTRUCTIONS

Settings (CONTINUED)

Hold default - Touch and enter default hold temperature between -5 to +40 (-21C to +4C) on number pad or select factory default .

Defrost time - Touch . This is the amount of time the defrost function will run before automatically switching back to the chilling mode. Factory default setting is 20 minutes. Use or to adjust the duration of defrost within a range of 10-30 minutes. The Quickchiller may not run for the entire length of time set, but will move to drip cycle once appropriate coil temperature has been reached.

Drip time - Touch . This is the amount of time the drain heater will run after a hot-gas defrost function before automatically switching back to the chilling mode. Factory default setting is 10 minutes. Use or to adjust the drip time within a range of 5-15 minutes.

Probes - Touch to indicate the number of probes being used in the chiller (0, 1 or 3).

Factory Settings - Touching will reset all presets and user-defined settings to factory default settings. **Warning: Pressing Factory Reset will erase all User Settings, Recipes and presets programmed by the user. Note:** Factory Settings cannot be reset when QC2 is in chill mode.

Screen calibration - Touch - and follow instructions to calibrate the touch screen. **Note:** Screen cannot be calibrated when QC2 is in chill mode.

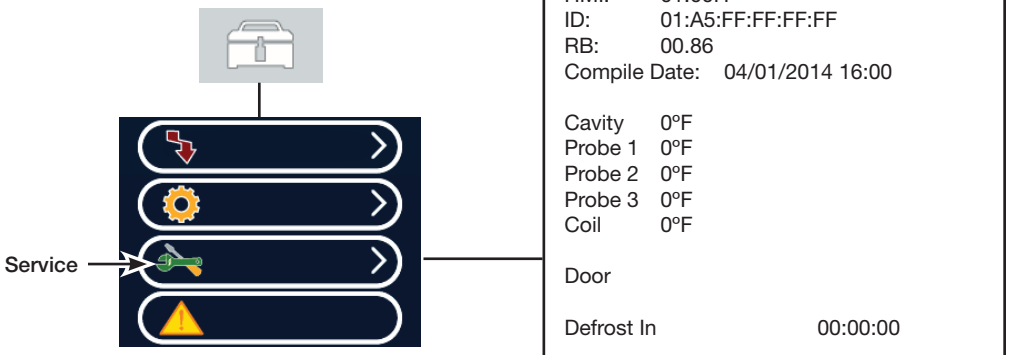
Alarm - Alarm will sound when product probe reaches the temperature set by the user. Touch to set alarm to off , single beep , or continuous beep . Open door to end alarm.

Demo Mode - Touch and enter code 6702 on number pad to cycle through control screens without activating a chill cycle or changing the settings.

OPERATION

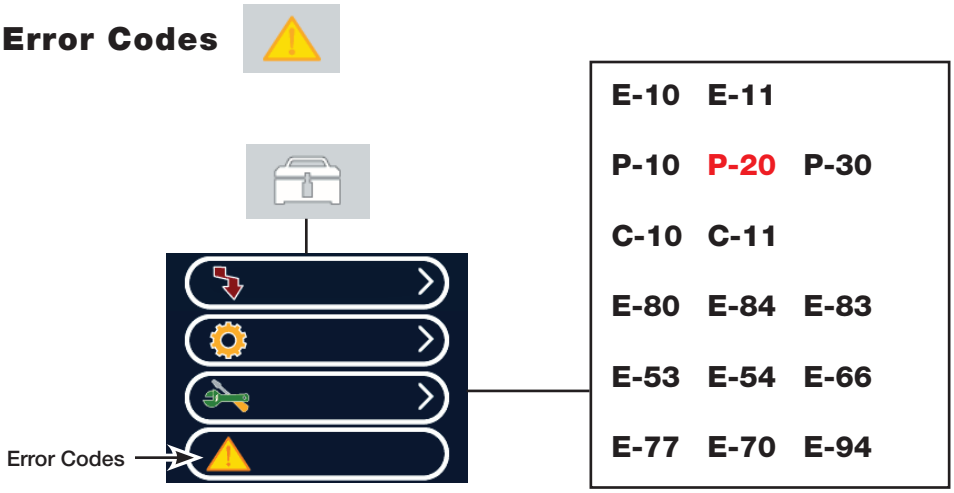
OPERATING INSTRUCTIONS

Service



Touch to view Service settings.

Error Codes



Touch to view error codes.

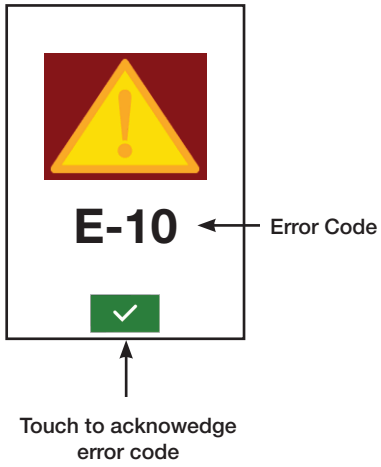
Code number will be highlighted if error is present.

OPERATION

OPERATING INSTRUCTIONS

Error Message

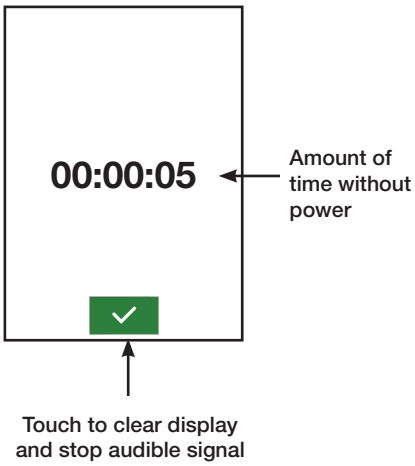
If an error occurs, will appear on screen, along with the error code. Touch to acknowledge error. Refer to error codes in this manual.



Power Outage

If a power failure occurs, the control will produce an audible signal every 10 seconds and the display will indicate the amount of time the power was off. Timer will stop accumulating once 24 hours is reached.

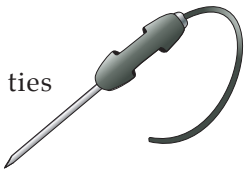
Touch to clear the display and stop the audible signal.



OPERATION

FOOD PROBE USE

Unpacking Food Probes



1. Cut and remove the plastic ties keeping the probe cables coiled during shipment.

   When removing the ties, exercise caution to avoid accidentally cutting the black plastic covers on the probe cable wires.
2. Uncoil the probe cables and insert the metal portion of each probe into the bracket mounted on the inside of the cabinet. Proper probe placement is in the following sequence:

   Place the top probe (Product Probe 1) in the top bracket. On equipped models, place the center probe (Product Probe 2) in the middle bracket, and place the bottom probe (Product Probe 3) in the bottom bracket position.
3. Before using the probes, wipe each probe and probe tip with a disposable alcohol pad to clean and sanitize.

Probe Cleaning Procedures

1. Remove all food residue from probes between loads and at the end of each production shift. Remove probes and wash in warm detergent solution. Wipe probe recepticals and probe holding brackets with warm detergent solution and a clean cloth. Remove detergent by wiping with clean rinse water and a cloth. Allow recepticals and holding brackets to air dry.
2. Wipe probes and probe brackets with disposable alcohol pad or sanitizing solution recommended for food contact surfaces.
3. Reattach the probes to the recepticals and place probes into the proper probe bracket.
4. Wipe each probe with a disposable alcohol pad prior to inserting the probe into a new food product.

USER INFORMATION

Time & Temperature Guidelines

To assure quality and safety in chilled processed food handling, it is important to observe the following guidelines.

1. All foods should be covered prior to chill or freeze processing.
2. The temperature of foods should be rapidly reduced from 140°F to 40°F (60°C to 4°C) within a period of 4 hours.
3. Foods can be safely removed from the chiller cabinet at a product temperature of 40°F (4°C) or lower.
4. Chilled foods should be stored under refrigeration designed to hold products at 34° to 38°F (1° to 3°C) for a maximum of 5 days or less. A 5-day shelf life includes the day of production and the day of consumption.
5. All potentially hazardous cooked foods that have been chilled followed by reheating and hot food holding must be reheated to a minimum core temperature of 165°F (74°C) for 15 seconds prior to serving. Refer to local food codes for possible exceptions.
6. Always reference and adhere to local food codes and HACCP guidelines with regard to time and temperature for chilling or frozen food processing.

ALLOW A MINIMUM OF 30 MINUTES OF PRECHILL TIME BEFORE PROCESSING.

OPERATION

FOOD HANDLING GUIDELINES

PRODUCT COVERING

To maintain sanitation control when loading the Quickchiller, foods should be above 140°F (60°C) and should be tightly covered. A tight cover is an important part of proper chilling methods and must be used to prevent the possibility of accidental contamination by airborne bacteria.

Stainless steel pan covers may be used. Stainless steel covered pans must include a label indicating pan contents and use-by date. A cover of clear plastic wrap is also acceptable.

When using plastic wrap as a food covering, make certain the wrap comes in direct contact with the surface of the product and extends around and down each side of the pan. This is an important step to ensure proper chilling times. Spacing left between the plastic wrap and the surface of the food creates an insulating air gap resulting in more product heat retention and a slower chilling rate.

Meat roasts and other larger, dense products should be no larger than a weight of 8 to 10 pounds (4 to 5 kg) per item. Because of the density of these products, chilling could take up to 4 hours. Due to longer chilling time required, it is also suggested these items be chilled at the end of the day with the chiller set in the automatic chill/hold mode. This method provides the operator with fully chilled product holding at a refrigerated temperature on the following day.

Prior to chilling, roasts must be wrapped in clear plastic and placed in the chiller. ***Do not slice roasted meats until the day of service.***

Portioned meat products such as pork chops or meat patties should be chilled directly on the sheet pans on which they were cooked. Cover the sheet pans with clear plastic wrap for chilling. After chilling, this type of product can be placed in steam table pans for refrigerated storage.

PORTIONING & PACKAGING

1. During portioning and packaging operations, all foods should be maintained at or above 140°F (60°C), or below 40°F (4°C).
2. If cooked foods exceed the processing capacity of the Quickchiller, place hot product in an appropriate back-up hot holding device such as an Alto-Shaam® Halo Heat Combimate holding cabinet which will accommodate a roll-in cart (trolley). Hold hot foods at a temperature above 140°F (60°C).

   If a hot food holding cabinet is not available, place hot foods in short-term refrigerated storage until these products can be loaded into the Quickchiller for the next available processing cycle. Production of cooked foods should not exceed the processing capabilities of the chiller, therefore, do not adopt short-term refrigeration as a routine practice but use only in an emergency situation.
3. Fill containers to a 12 pound (5kg) limit or maximum depth of 2" (51mm) of product. Do not use plastic or Lexan® containers.
4. For faster cooling, place lids and over-wrap materials directly on the surface of foods. As previously indicated, air trapped between the lid and food surface acts as an insulator and will increase chill time.
5. For faster chilling times, place low profile foods such as chicken quarters, fish fillets, or ribs in low depth containers such as 1-1/2" (38mm) deep sheet pans.
6. Large cuts of meat and poultry that weigh a maximum of 8 to 10 pounds (4 to 5 kg) maximum should be individually wrapped with tight fitting film and placed on sheet pans in the chill cabinet.

OPERATION

QUICKCHILLER PAN CAPACITY:

The following Quickchiller Capacity Chart indicates the number of pans that can be accommodated in the appropriate size chiller for the chilling or freezing function. Additional pans can be accommodated ***only*** when using the Quickchiller for holding at a refrigerated temperature or at a maintenance temperature for frozen food.

DO NOT OVERLOAD THE QUICKCHILLER FOR THE PROCESSING FUNCTION.

CHILLING PAN CAPACITY CHART

CHILLER MODEL	NO. PANS	STANDARD PAN SIZES	TOTAL WEIGHT	GASTRONORM PAN SIZES	TOTAL
QC2-3	3	12" x 20" x 2-1/2" pans	36 lb	530mm x 325mm x 65mm 1/1	16 kg
QC2-20	5 10*	12" x 20" x 2-1/2" pans 18" x 26" x 1" pans	60 lb 60 lb	530mm x 325mm x 65mm 1/1 n/a	27 kg
QC2-40	20 10	12" x 20" x 2-1/2" pans 18" x 26" x 1" pans	160 lb 60 lb	530mm x 325mm x 65mm 1/1 n/a	73 kg
QC2-100	24† 48*† 20*†	12" x 20" x 2-1/2" pans 12" x 10" x 2-1/2" pans 18" x 26" x 1" sheet pans	240 lb 240 lb 120 lb	530mm x 325mm x 65mm 1/1 265mm x 325mm x 65mm 1/2 n/a	109 kg 109 kg

*ADDITIONAL WIRE SHELVES REQUIRED FOR MAXIMUM CAPACITY †POSITION PANS ON EVERY OTHER RAIL

PRODUCT CAPACITY PER PAN:

Foods for chill or freeze processing should be portioned into shallow pans to a depth ***not to exceed*** 2-inches (51mm). The individual pan capacity chart below is provided as a general guideline to help determine the number of processing loads required for the total quantity of food to be processed.

INDIVIDUAL PAN CAPACITIES

Steam Table Pan:	12" x 20" x 2-1/2"	12 lb	Gastronorm 1/1	530mm x 325mm x 65mm	5,4 kg
Steam Table Pan:	12" x 10" x 2-1/2"	6 lb	Gastronorm 1/2	265mm x 325mm x 65mm	2,7 kg
Full-Size Sheet Pan:	18" x 26" x 1"	6 lb	n/a	—	—
Half-Size Sheet Pans:	18" x 13" x 1"	3 lb	n/a	—	—

EXAMPLE: 132 lb per batch ÷ 12 lb per 12" x 20" x 2-1/2" pan = **11 PANS**

60 kg per batch ÷ 5,4 kg per 325mm x 530mm x 65mm pan = **11 PANS**

OPERATION

THE FOLLOWING CHART OF PORTION SIZES AND SERVING CAPACITY PER PAN IS PROVIDED AS A GENERAL REFERENCE ONLY.

PORTION SIZES and PAN CAPACITIES

PAN SIZE ›	12" x 20" x 2-1/2"	325 x 530 x 65mm	
FOOD CATEGORY	SERVING SIZE	METRIC EQUIVALENT SERVING SIZE	SERVINGS PER PAN
BREAKFAST ITEMS:			
Griddle Cakes, Waffles, French Toast (2 TO 3 EACH)	4 oz	113 gm	48
Eggs	2 to 4 oz	57 to 113 gm	96 to 48
Breakfast Meats	2 oz	57 gm	96
Cooked Cereals or Grains	4 oz	113 gm	48
Fruit Compote	4 oz	113 gm	48
Meat, Poultry, Fish, Seafood	4 oz	113 gm	48
Casseroles and Extended Dishes	6 to 8 oz	170 to 227 gm	32 to 24
Vegetables	4 oz	113 gm	48
STARCHES:			
Potato, Rice, Pasta, Stuffings, Beans	4 oz	113 gm	48
Gravies and Au Jus	2 oz	57 gm	96
Sauces	4 oz	113 gm	48
Protein and Starch-Based Salads	4 to 6 oz	113 to 170 gm	48 to 32
DESSERTS:			
Pudding, Custard, Mousse, Jello	4 oz	113 gm	48

CARE AND CLEANING

CLEANING AND PREVENTATIVE MAINTENANCE

PROTECTING STAINLESS STEEL SURFACES

It is important to guard against corrosion in the care of stainless steel surfaces. Harsh, corrosive, or inappropriate chemicals can completely destroy the protective surface layer of stainless steel. Abrasive pads, steel wool, or metal implements will abrade surfaces causing damage to this protective coating and will eventually result in areas of corrosion. Even water, particularly hard water that contains high to moderate concentrations of chloride, will cause oxidation and pitting that result in rust and corrosion. In addition, many acidic foods spilled and left to remain on metal surfaces are contributing factors that will corrode surfaces.

Proper cleaning agents, materials, and methods are vital to maintaining the appearance and life of this appliance. Spilled foods should be removed and the area wiped as soon as possible but at the very least, a minimum of once a day. Always thoroughly rinse surfaces after using a cleaning agent and wipe standing water as quickly as possible after rinsing.

CLEANING AGENTS

Use non-abrasive cleaning products designed for use on stainless steel surfaces. Cleaning agents must be chloride-free compounds and must not contain quaternary salts. Never use hydrochloric acid (muriatic acid) on stainless steel surfaces. Always use the proper cleaning agent at the manufacturer's recommended strength. Contact your local cleaning supplier for product recommendations.

CLEANING MATERIALS

The cleaning function can usually be accomplished with the proper cleaning agent and a soft, clean cloth. When more aggressive methods must be employed, use a non-abrasive scouring pad on difficult areas and make certain to scrub with the visible grain of surface metal to avoid surface scratches. Never use wire brushes, metal scouring pads, or scrapers to remove food residue.

⚠ CAUTION

TO PROTECT STAINLESS STEEL SURFACES, COMPLETELY AVOID THE USE OF ABRASIVE CLEANING COMPOUNDS, CHLORIDE BASED CLEANERS, OR CLEANERS CONTAINING QUATERNARY SALTS. NEVER USE HYDROCHLORIC ACID (MURIATIC ACID) ON STAINLESS STEEL. NEVER USE WIRE BRUSHES, METAL SCOURING PADS OR SCRAPERS.

CARE AND CLEANING

INTERIOR CLEANING

Remove the optional roll-in cart (trolley) from cart equipped models. Open the Quickchiller door to warm the interior of the cabinet.

1. Remove any loose food debris with a cleaning cloth or small hand broom.
2. Use a mild, non-abrasive detergent and warm water. Wipe-down the interior of the cabinet, removing all food residue. This includes the ceiling, floor, walls and fan panel.

   Wipe-down the interior door panel and clean the vinyl gaskets. Make certain to clean under the gaskets to remove any mildew accumulation or food residue.
3. Rinse all interior surfaces including the cabinet door and gasket with clean water and a cloth. Remove all rinse water.
4. Wipe interior surfaces with a clean cloth and sanitizing solution for use on metal and vinyl food contact surfaces. This is an important step to control the build-up of unwanted mildew and mold in the refrigeration system.
5. Allow interior to air dry with door open.

EXTERIOR CLEANING

1. Wipe all exterior surfaces including the control panel, door frame, latches, and hinges with a damp cloth containing a mild, non-abrasive, non-chloride detergent solution.
2. Rinse detergent solution with a cloth and warm water. Allow exterior to air dry.
3. Polish with any standard stainless steel polish designed for use on food service equipment. When cleaning the exterior of the cabinet, always wipe with the grain of the stainless steel to avoid scratching or marring the finish. Avoid an accumulation of oil based polish or cleaner collecting along the edges of the keyboard overlay on the control box. Oil build-up around the control overlay could eventually loosen the panel.

DO NOT USE ABRASIVE CLEANING COMPOUNDS OR IMPLEMENTS.

⚠ DANGER

DISCONNECT UNIT FROM POWER SOURCE BEFORE CLEANING OR SERVICING.

PROBE CLEANING PROCEDURES

1. Remove all food soil from probes between loads and at the end of each production shift. Wipe entire probe, cable assembly, and probe holding door bracket with warm detergent solution and a clean cloth.
2. Remove detergent by wiping each probe, cable, and bracket with clean rinse water and a cloth.
3. Wipe probes and probe brackets with disposable alcohol pad or sanitizing solution recommended for food contact surfaces
4. Allow probe and cable to air dry in probe holding door bracket.
5. Wipe the probe with a disposable alcohol pad prior to inserting into a new food product.

FOOD TROLLEY CLEANING

1. Take food trolley to a cart wash area. Trolleys may be cleaned using any mild cleaning detergent and warm water.
2. Hand wipe all framing, slides, drip pan, and base. Thoroughly clean debris from the casters. A spray hose can be used for easier cart cleaning.
3. Remove detergent solution with warm water.
4. Wipe or spray with a sanitizing solution designed for use on metal and vinyl food contact surfaces.
5. Allow trolley to air dry.

MONTHLY COMPRESSOR & CONDENSER MAINTENANCE

Keep the condenser coils free of dust and debris build-up to insure proper air circulation and cooling of the refrigeration system.

1. Turn power supply to the cabinet OFF.
2. Using a vacuum or small hand broom, brush the condenser coils in a vertical motion to remove any accumulated dust or debris.
3. Turn breaker switches ON and replace air grill.

DANGER

AT NO TIME SHOULD THE INTERIOR OR EXTERIOR BE STEAM CLEANED, HOSED DOWN, OR FLOODED WITH WATER OR LIQUID SOLUTION OF ANY KIND. DO NOT USE WATER JET TO CLEAN.

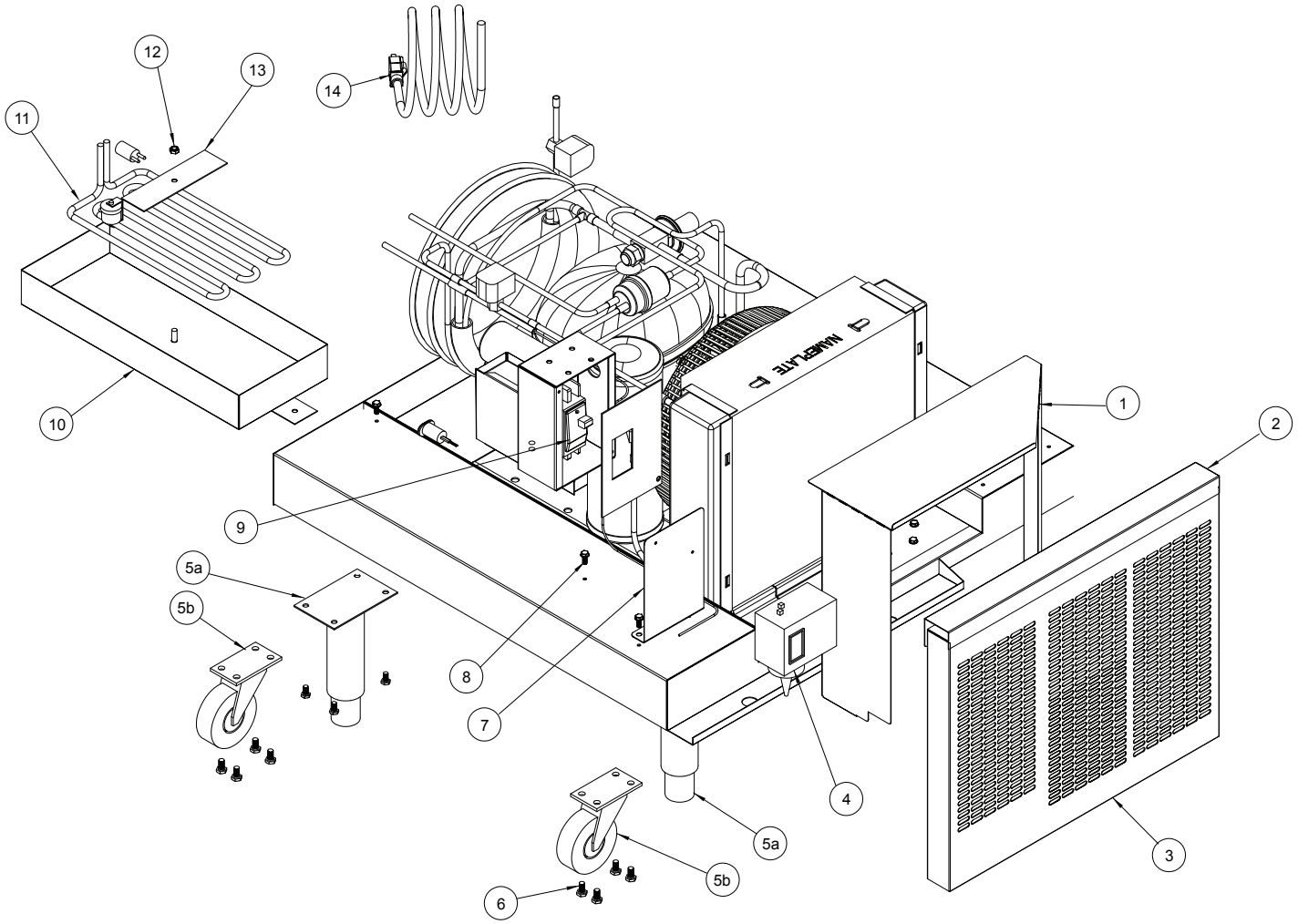
SEVERE DAMAGE OR ELECTRICAL HAZARD COULD RESULT.

WARRANTY BECOMES VOID IF APPLIANCE IS FLOODED

TROUBLESHOOTING

Error code	Action Required
E-10 – Cavity Sensor Shorted	This error message indicates a problem with the interior cavity sensor. The Quickchiller will not operate in any operational mode. Call service.
E-11 – Cavity Sensor Open	This error message indicates a problem with the interior cavity sensor. The Quickchiller will not operate in any operational mode. Call service.
P-10 – Probe 1 shorted	This error message indicates a problem with the Probe 1. The Quickchiller will operate normally in the Time mode but will not operate in the Probe mode. Call service.
P-20 – Probe 2 shorted	This error message indicates a problem with the Probe 2. The Quickchiller will operate normally in the Time mode but will not operate in the Probe mode. Call service.
P-30 – Probe 3 shorted	This error message indicates a problem with the Probe 3. The Quickchiller will operate normally in the Time mode but will not operate in the Probe mode. Call service.
C-10 – Coil sensor shorted	This error message indicates a problem with the display identified coil sensor. The Quickchiller will not operate in any operational mode. Call service.
C-11 – Coil sensor open	This error message indicates a problem with the display identified coil sensor. The Quickchiller will not operate in any operational mode. Call service.
E-80 – EEPROM error	This error message indicates the control memory is not correctly reading user-set values. The Quickchiller will remain operational but the user defined settings will be reloaded to the default values. The control will revert to factory default settings and will require operator modification each time the unit is used. Call Service.
E-83 – EEPROM not repsonding	EEPROM not responding. Call service.
E-84 – EEPROM User Options Error	User options error. Turn unit on and off to reset. If problem persists call Service
E-53 – Control hardware error	Fatal error. Unit will not opperate. Call service.
E-54 – Control hardware error	Fatal error. Unit will not opperate. Call service.
E-66 – Control processor reset	Processor reset on control board. Call Service.
E-70 – Personality changed	Control Board personality changed during operation. Call Service.
E-77 – Defrost overdue	Unit is more than 1 hr overdue for defrost. Defrost chiller. If error persists call Service.
E-94 – Communication failure	Interface board and control board not communicating. The Quickchiller will not operate in any mode. Call Service.

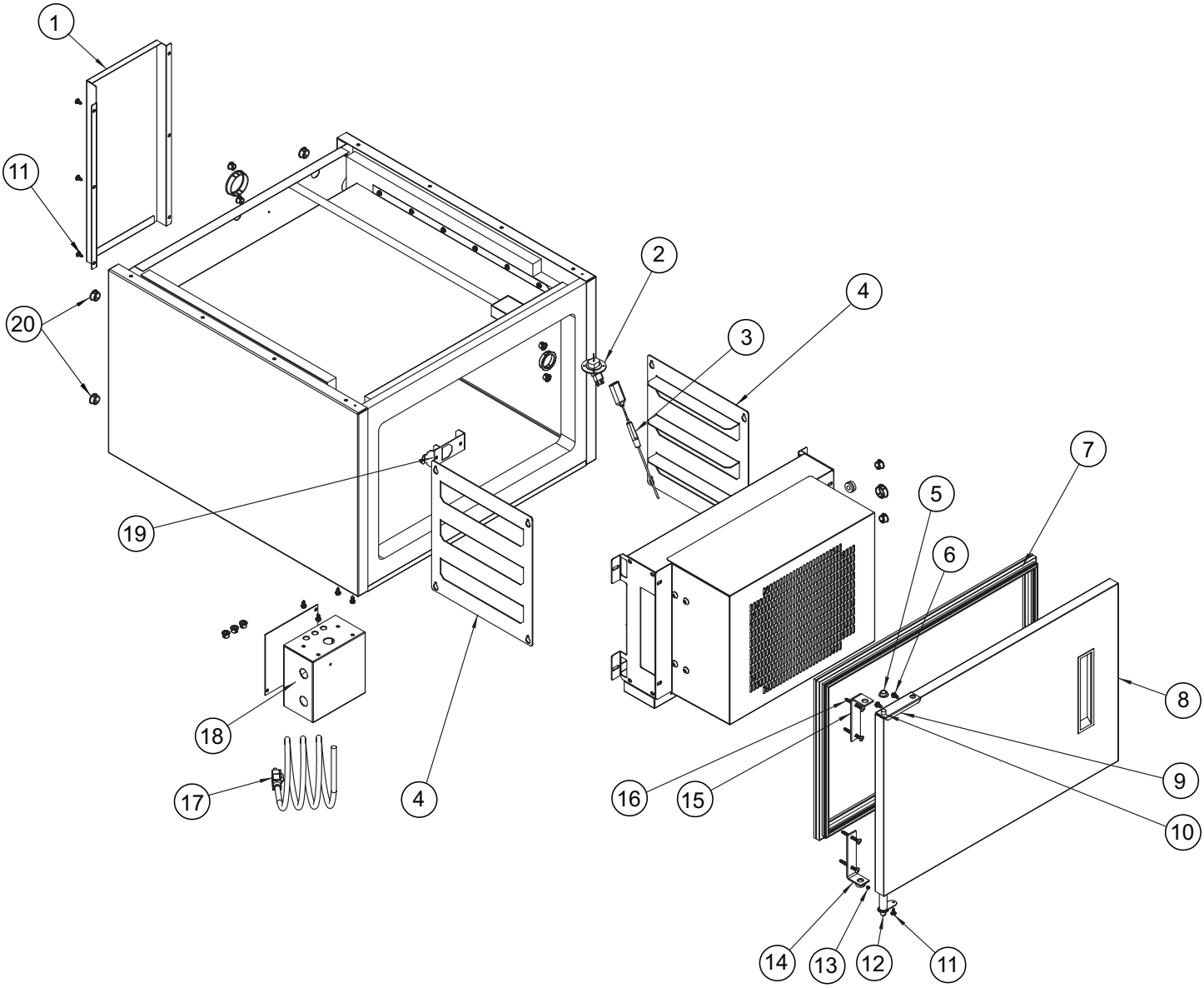
QC2-3 BOTTOM



Item	Part	Description	Qty.
1	RE-29821	Condensing Unit Duct	1
2	PE-29819	Top Louver Channel	1
3	PE-29830	Compressor Louver	1
4	SW-29823	Pressure Switch	1
5a	5014889	Leg Assembly (Set of 4)	4
	LG-29904	Leg, 6"	1
	SC-29824	Bolt, 1/4" .20" x 5" Shoulder	4
5b	CS-29822	Caster Assembly	4
	CS-29822	3" Ranserve Caster Non-Locking, Option	4
	SC-29824	Bolt, 1/4" .20" x 5" Shoulder	4
6	SC-29824	Bolt, 1/4-20 x 3.5" Shoulder Bolt Hex Head	16
7	BX-29820	Electrical Mounting Bracket	1
8	SC-29829	Bolt, 10-24x1/2 H/W/H 410 SS F08ZS Hex Head	12
9	FU-29901	Breaker, 2 Pole 20 Amp, QOU220 Universal	1
10	PN-29825	Condensate Evaporator Pan	1
11	EL-29828	Element Condensate Pan, 115V 200W Evap. 000274 N	1
12	NU-29827	Nut, 10-24 Stainless Nylock	1
13	BT-29826	Tie Down Bracket for Elect Condensate Evaporator Heater	1
14	CD-29831	Cord with Plug, 20Amp 125V 5-20P, 9' Long	1

PARTS INFORMATION

QC2-3 BOX VIEW

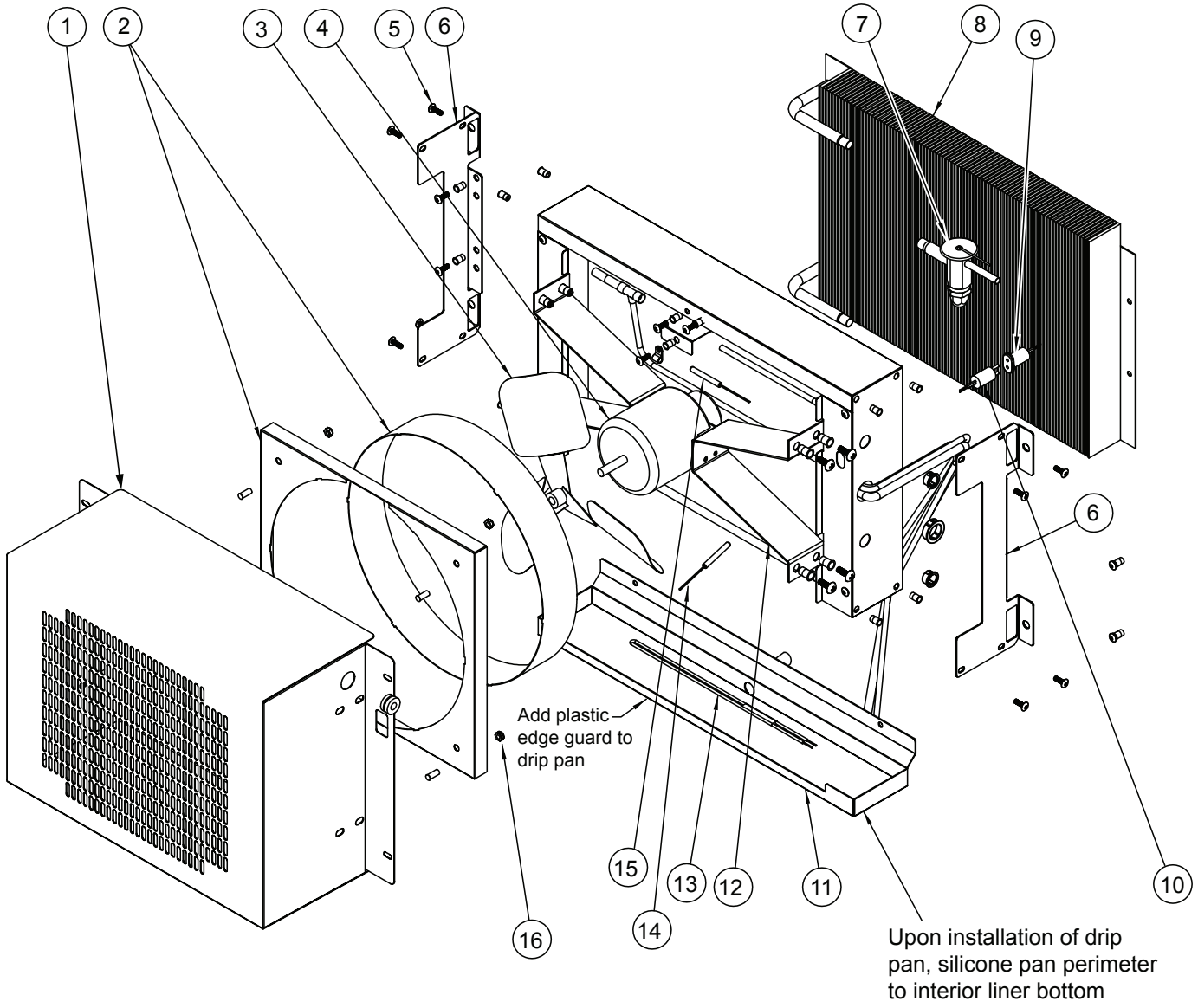


Item	Part	Description	Qty.
1	BT-29841	Holding Bracket Ref Line	1
2	PR-35771	Probe Receptacle Assembly	1
3	PR-36201	Probe, Quick Connect	1
4	SR-29832	Stainless Steel Side Rack	2
5	BU-29937	Bushing, Nylon Hinge 118	1
6	SC-29839	Screw, 10x1/2" Slot	1
7	GS-29838	Gasket, 15.59 x 24.25 Push In Press In	1
8	DR-29833	Door, Hinged Left	1
9	HG-35736	Hinge, Top Door, Left Hand Channel	1
10	PI-35930	Hinge Pin	1
11	SC-29835	Screw, 10x1/2" T/H/P 410 S/S M4XG	1

Item	Part	Description	Qty.
12	HG-29834	Hinge, Spring Load Assembly	1
13	SC-29837	Screw, 1/4-20 x 5/8" Socket Set 18-8 SS	1
14	HG-29836	Hinge, Strap w/Collar 38mm L-Shaped	1
15	HG-29960	Unit Hinge Bracket	1
16	SC-29910	Screw, 10x2" THP TYPE A S M62G 410SS	4
17	RE-29844	Cord, 2 Prong Male, for Fan	1
18	BX-29843	Electrical Box	1
19	HL-29840	Food Probe Holder	1
20	PG-35098	Plug, 3/4" Grommet	5
21*	ST-35099	Stud, Side Rack Mounting	4

*NOT SHOWN

QC2-3 COIL VIEW

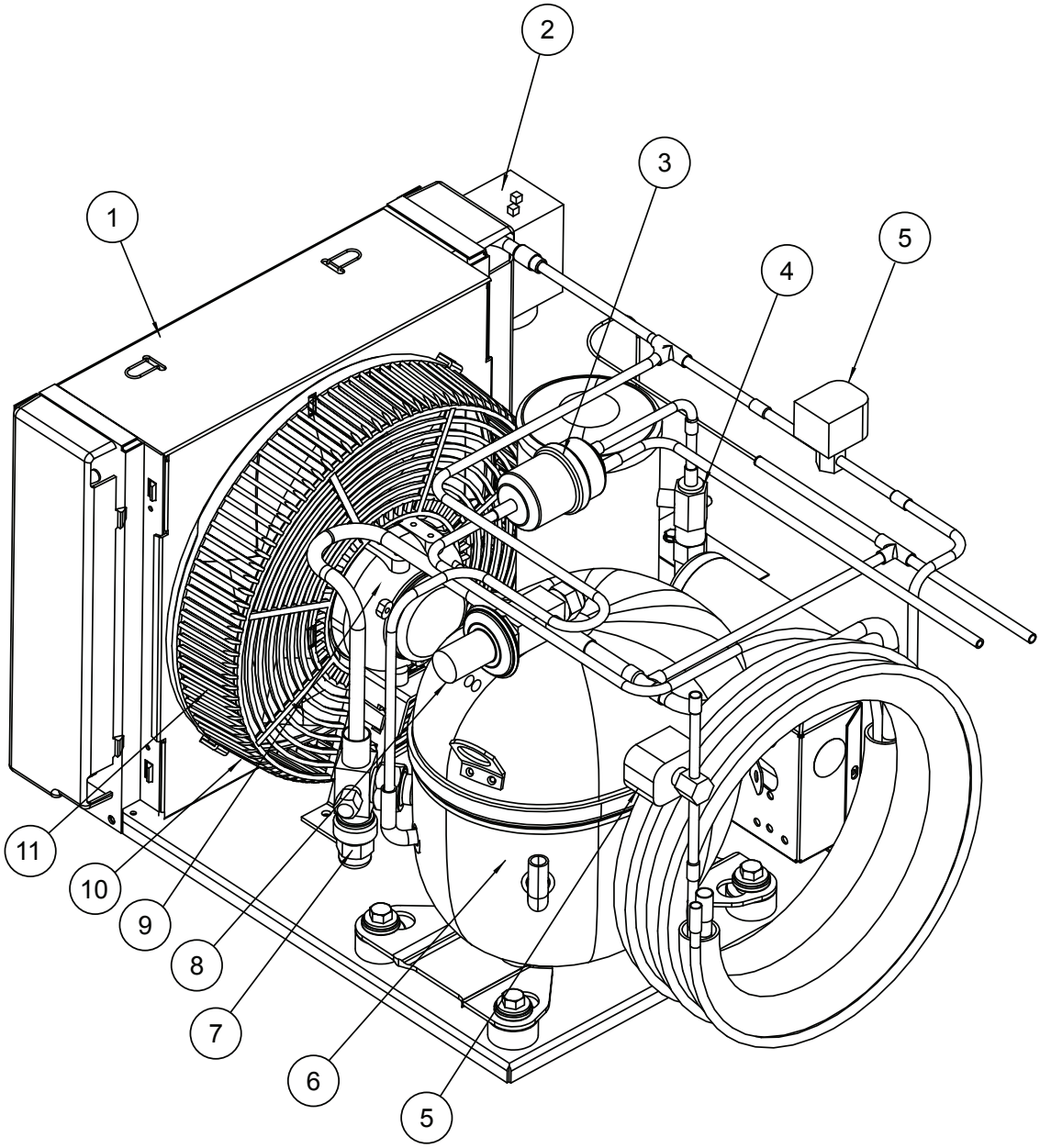


Item	Part	Description	Qty.
1	GD-29848	Fan Guard	1
2	GD-29850	Fan Shroud Assembly	1
3	FA-29854	Blade, 12" (305mm) Evaporator Fan	1
4	FA-29853	Motor, Fan ESP-0L75EM14	1
5	SC-29855	Bolt, 10-24x5 Phillip Truss	19
6	BT-29847	Evaporator Coil Mounting Bracket	2
7	VA-29852	Valve, 1/4 Ton R404 L-T MOP	1
8	RE-29846	Coil Assembly, 12x17-1/4 Blast Chiller 3EX-0802C	1

Item	Part	Description	Qty.
9	CD-29831	Cord, 2 Prong 24" (610mm) Female	1
10	CD-29858	Cord, 2 Prong 24" (610mm) Male	1
11	PN-29851	Drain Pan with Tubing, Evaporator BC-3	1
12	BT-29849	Fan Mounting Bracket	2
13	CD-29860	Wire, 11" (279mm) Loop, Drain Heater	1
14	SN-34663	Coil Sensor/, Defrost/Sensor	1
15	SN-33541	Sensor, 1-3/4" (44mm) Long	1
16	NU-29827	Nut, 10-24 Stainless Nylock	4

PARTS INFORMATION

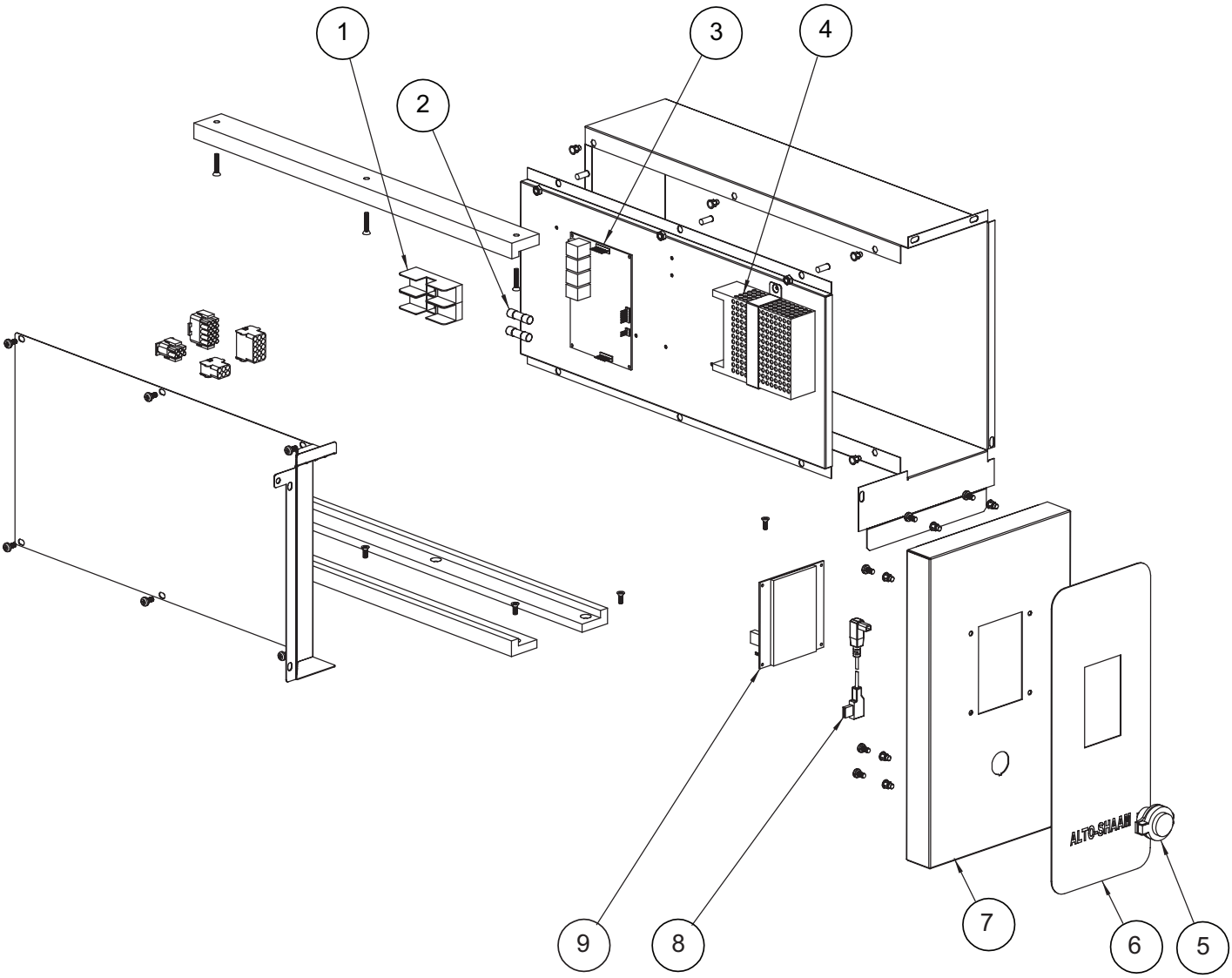
QC2-3 COMPRESSOR VIEW



Item	Part	Description	Qty.
1	RE-29861	Condensing Assembly, 1/2 MED R404A 120V	1
2	SW-29823	Pressure Switch	1
3	FI-29862	Dryer, 1/4" Filter with 2nd 1/4"	1
4	**	Service Valve King	1
5	VA-29863	Solenoid Valve & 120V Coil	2
6	**	Compressor	1
7	**	Service Valve Suction	1
8	VA-29864	Valve, Sporlan CRO-4-0/75 Crankcase Pressure Reg.	1
9	MO-29865	Motor, Fan Condenser Unit	1
10	FA-29866	Fan Blade	1
11	**	Fan Guard	1
		1/4" & 3/8" Diameter Copper Tubing is used	

**NOT AVAILABLE FROM FACTORY

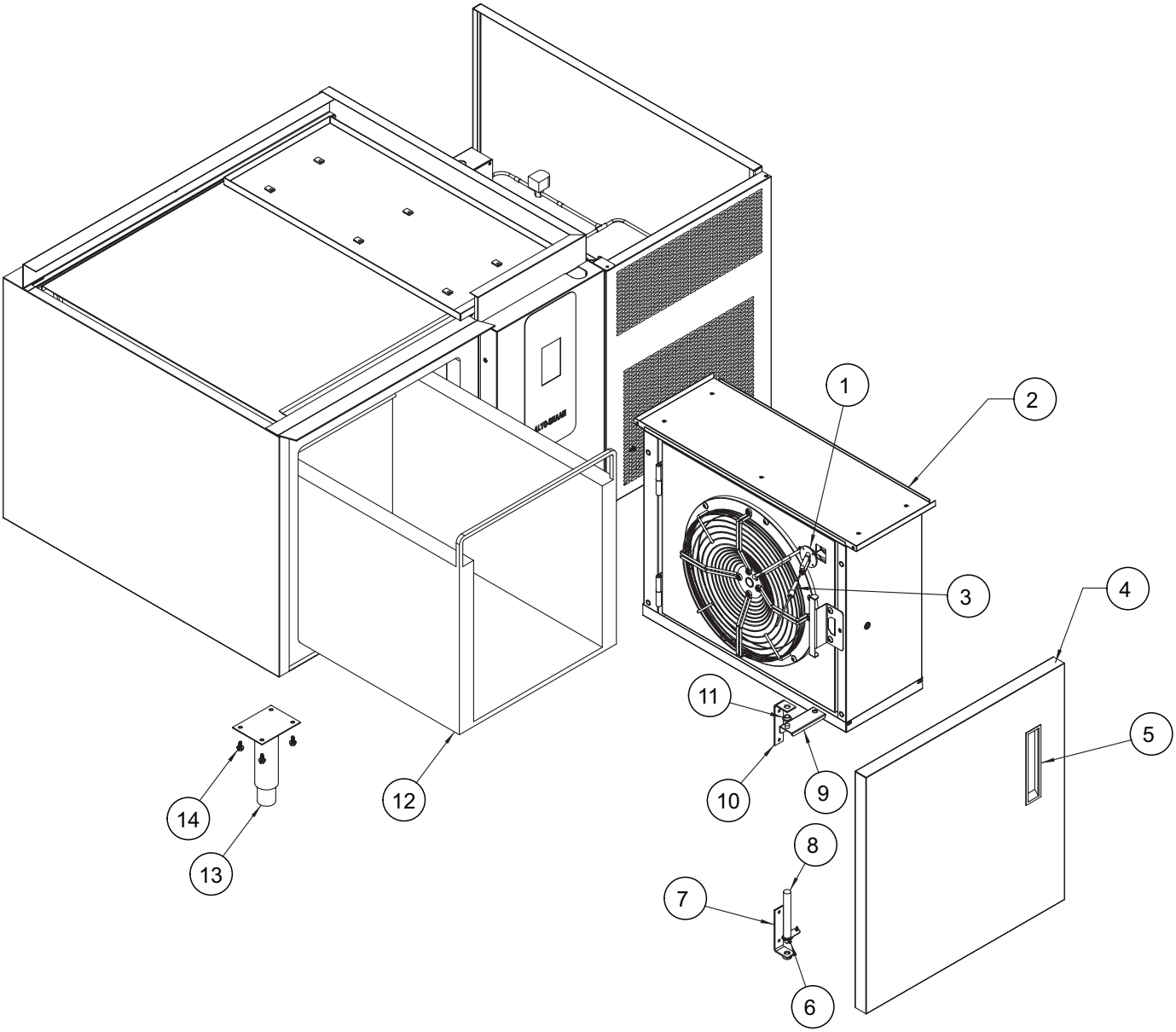
QC2-3 CONTROL BOX



Item	Part	Description	Qty.
1	BK-29919	Block, 20 Amp Fuse Holder	2
2	FU-29934	Fuse, 20 amp, Time Delay, #SLC020 480V Class G	2
3	CC-36419	Control Board	1
4	BA-29927	Power Supply, 115V to 12VDC	1
5	CB-35746	Connector, USB, Panel Mount	1
6	PE-36160	Panel Overlay	1
7	PN-29932	Control Panel	1
8	CB-36571	USB Communication Cable w/ plug	1
9	CC-36418	User Interface Board and Firmware	1

PARTS INFORMATION

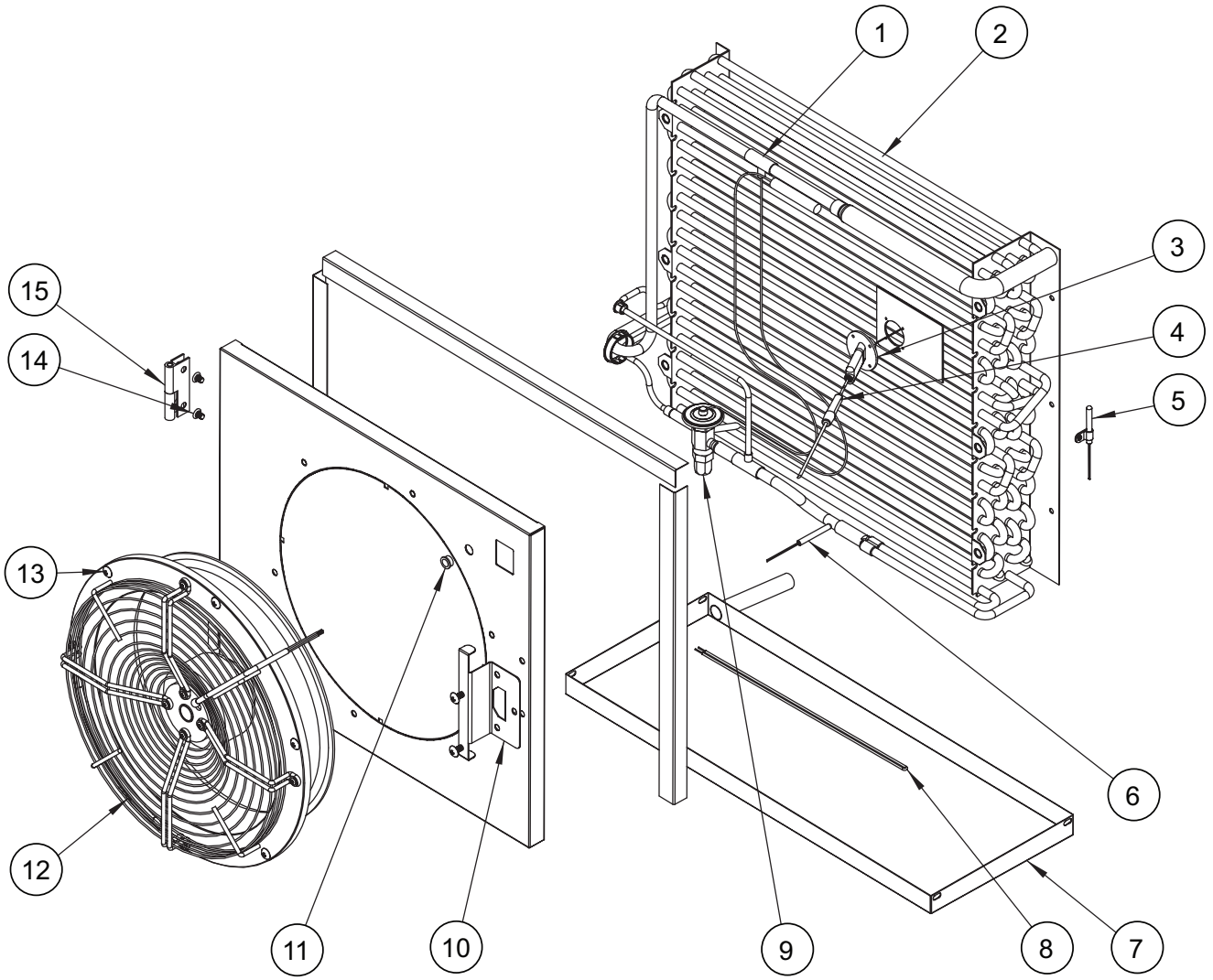
QC-20 BOX VIEW



Item	Part	Description	Qty.
1	PR-35771	Probe Receptacle Assembly	1
2	RE-29905	Coil Assembly	1
3	PR-36201	Probe, Product	1
4	DR-29957	Door Assembly with Handle, Hinged Left	1
	CONTACT FACTORY	Door Assembly with Handle, Hinged Right	
5	HD-29958	Door Handle, Recessed	1
6	SC-29837	Bolt, Black Set Screw	1
7	HG-29836	Hinge, Strap w/ Collar 41mm, L-shaped	1
8	HG-29834	Hinge, Self-Closing	1

Item	Part	Description	Qty.
9	HG-29959	Hinge, Top Door, Left Hand Channel	1
10	HG-29960	Hinge, Strap w/o Collar 38mm, L-shaped	1
11	BU-29937	Bushing, Nylon Hinge	1
12	SR-35827	Slide 9-Pan Rack, Standard	1
	SR-29969	Stainless Steel Side Rack, Optional	2
13	5014889	Leg Assembly (Set of 4)	4
	LG-29904	Leg, 6"	1
14	SC-29824	Bolt, 1/4" .20" x 5" Shoulder	4

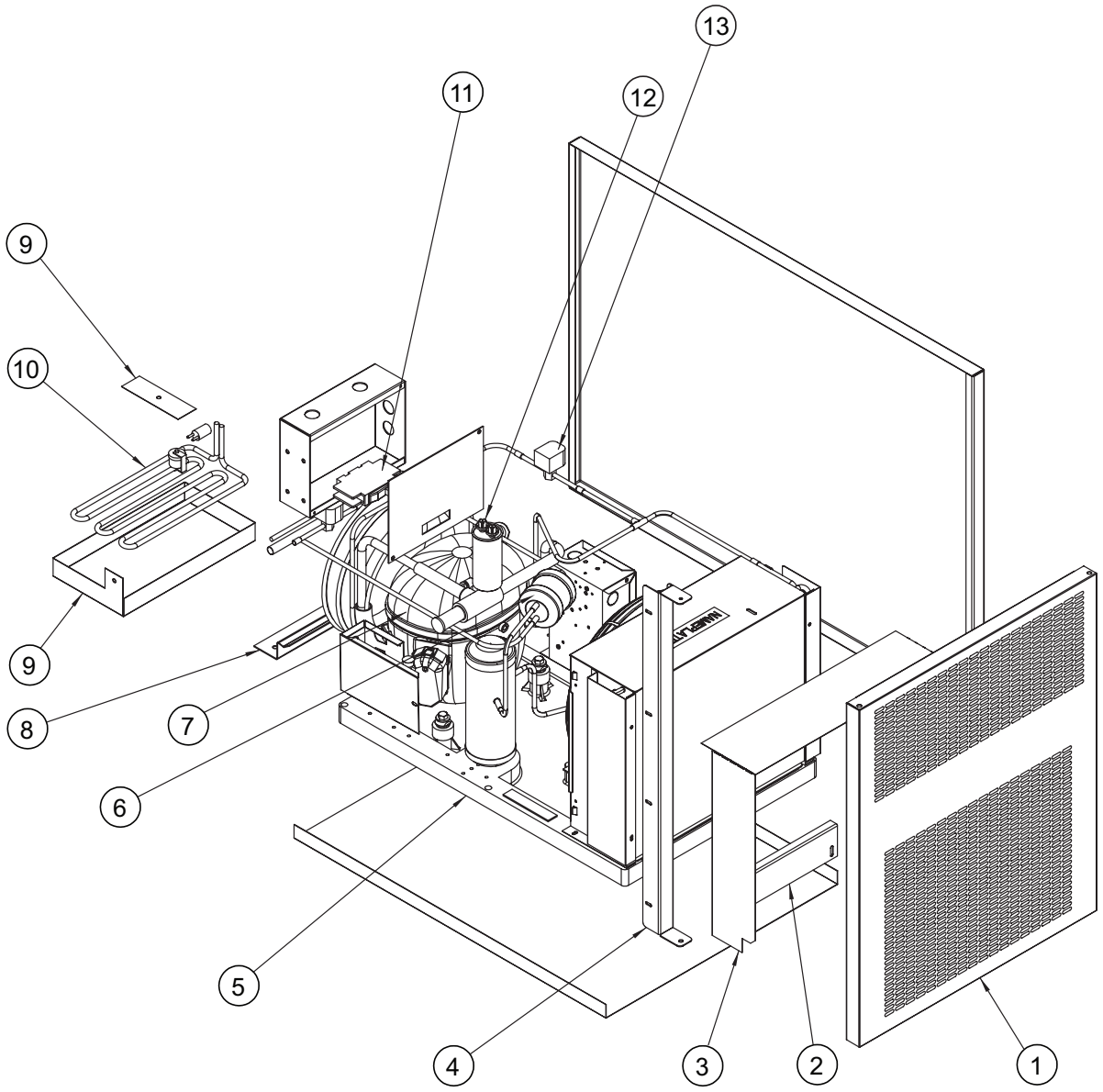
QC-20 COIL VIEW



Item	Part	Description	Qty.
1	TE-35100	Tee, Copper, 1/2 x 1/2 x 1/4	2
2	RE-29905	Coil, QC2-20 QuickChiller	1
3	PR-35771	Probe Receptacle Assembly	1
4	PR-36201	Probe, Product	1
5	SN-33541	Sensor, Air	1
6	SN-34663	Coil Sensor/, Defrost/Sensor	1
7	PN-29943	Drip Pan	1
8	CD-29860	Wire, 11" (279mm) Loop Drain Heater	1
9	VA-29900	Expansion Valve	1
10	LT-29940	Latch, Plate for Fan Door	1
11	BU-29937	Bushing, Nylon	1
12	FA-29945	Fan	1
13	SC-29935	Bolt, 1/4-20	19
14	SC-29936	Bolt, 1/4-20 x 3/8"	8
15	HG-29938	Hinge Assembly, 2" x 3" Lift Off Left	2

PARTS INFORMATION

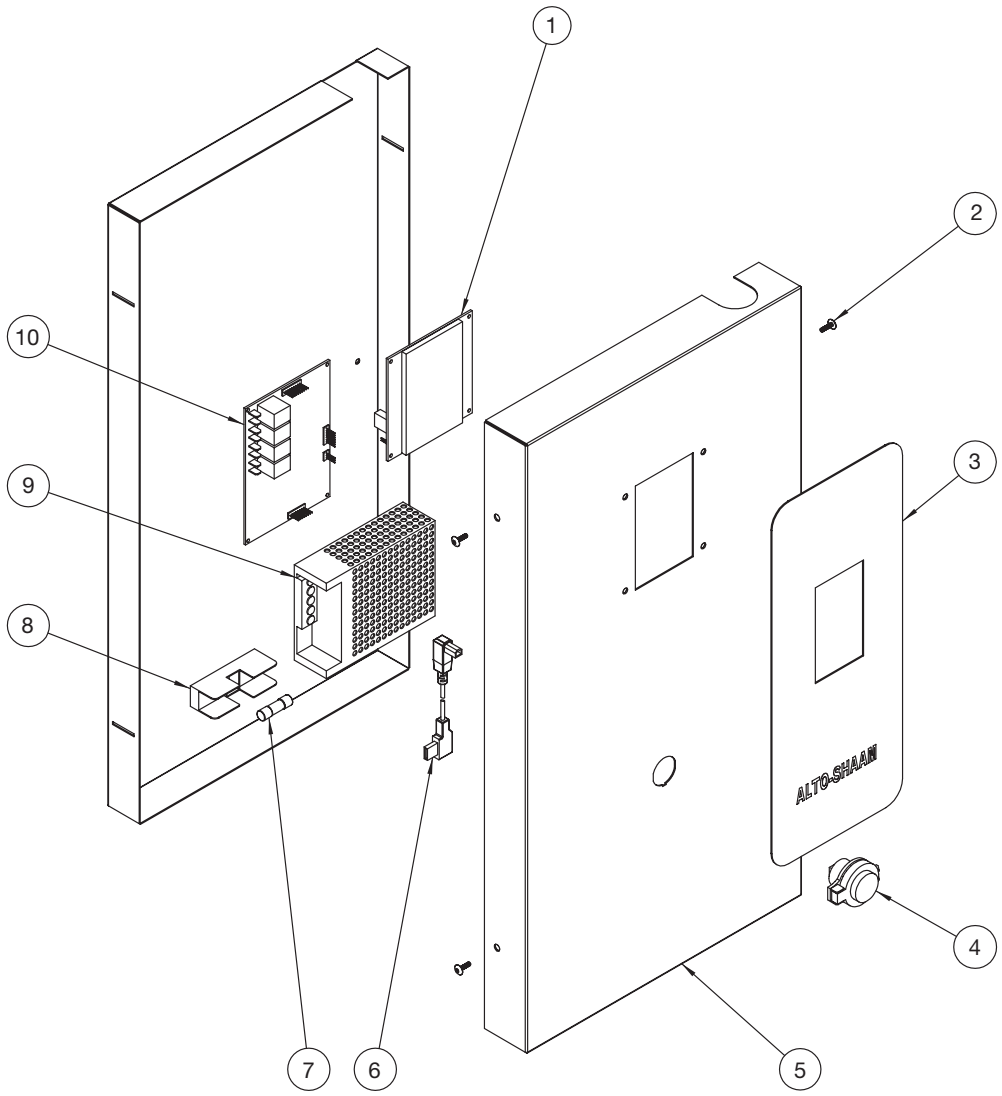
QC-20 COMPRESSOR VIEW



Item	Part	Description	Qty.
1	PE-29968	Compressor Louver	1
2	BT-29950	Bracket, Front Compressor Hold Down	1
3	PN-29949	Housing	1
4	BT-29967	Louver Mounting Bracket	1
5	RE-29948	Condensing Unit, 3/4 HP LT R404A 120V	1
6	FI-29954	Filter Dryer	1
7	**	Compressor	1
8	BT-29951	Bracket, Back Compressor Hold Down	1
9	RE-29966	Condensate Evaporator Pan, includes Hold Down Bracket	1
10	EL-29828	Evaporator Element, 115V 200W	1
11	FU-29965	Breaker, 1 Pole 20 Apm	1
12	CU-29964	Capacitor, 14MFD, 440VAC	1
13	VA-29893	Solenoid Valve	1
14*	MO-29955	Motor, 3/4 HP Compressor Fan Motor	1
15*	FA-29956	Fan Blade for Compressor Fan Motor	1
		1/4" & 3/8" Diameter Copper Tubing is used	

*NOT SHOWN **NOT AVAILABLE FROM FACTORY

QC-20 CONTROL PANEL

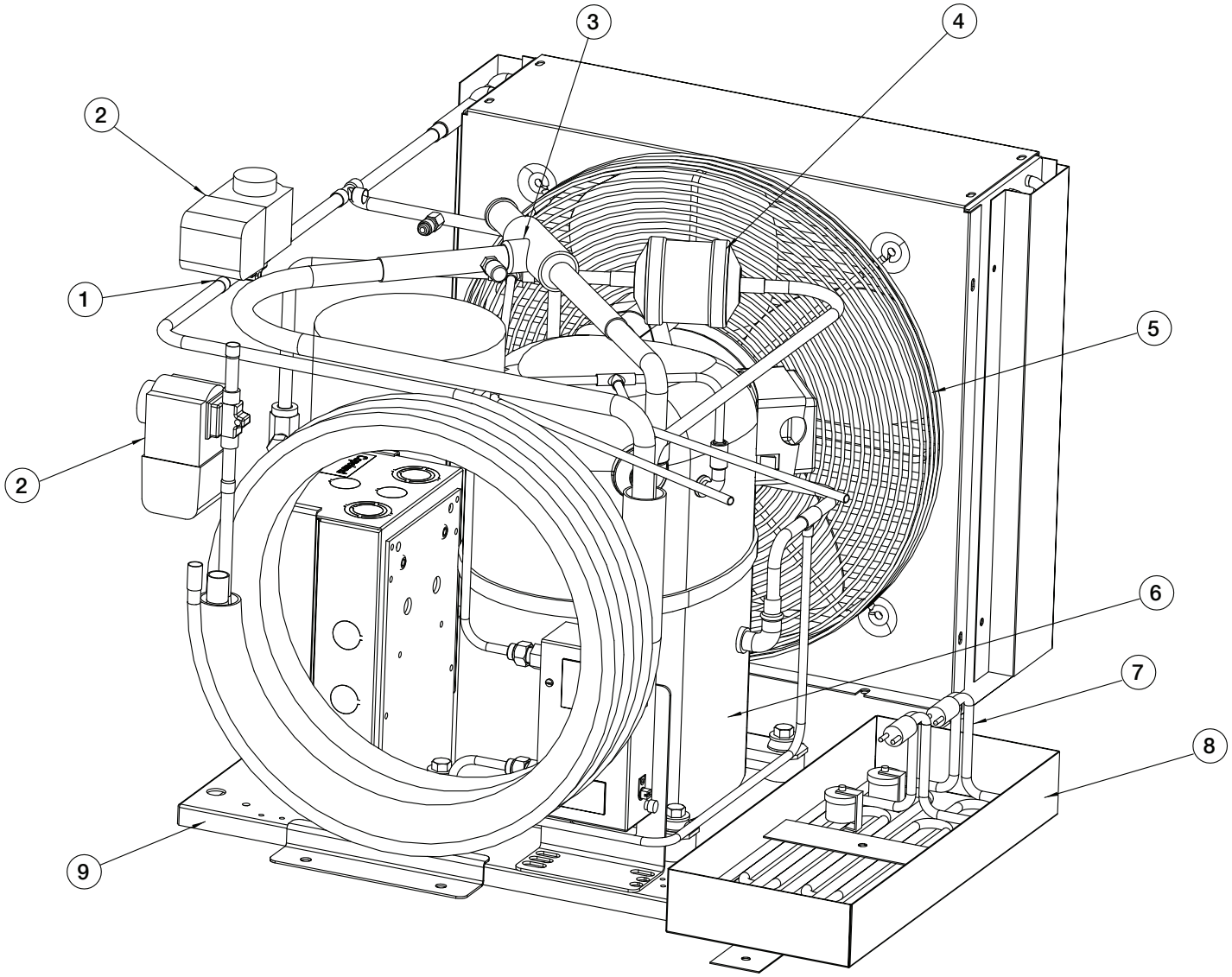


Item	Part	Description	Qty.
1	CC-36418	User Interface Board and Firmware	1
2	SC-29991	Screw, 6-32x1/2 T/H/P 18-8 SS Phillips Truss	4
3	PE-36130	Panel Overlay	1
4	CB-35746	Connector, USB, Panel Mount	1
5	PN-29962	Control Panel	1
6	CB-36571	USB Communication Cable	1
7	FU-29934	Fuse, 20 amp	1
8	BK-29919	Fuse Holder Block	1
9	BA-29927	Board, Power Supply	1
10	CC-36419	Control Board	1
11*	5017512	Beeper Assembly	1

*NOT SHOWN

PARTS INFORMATION

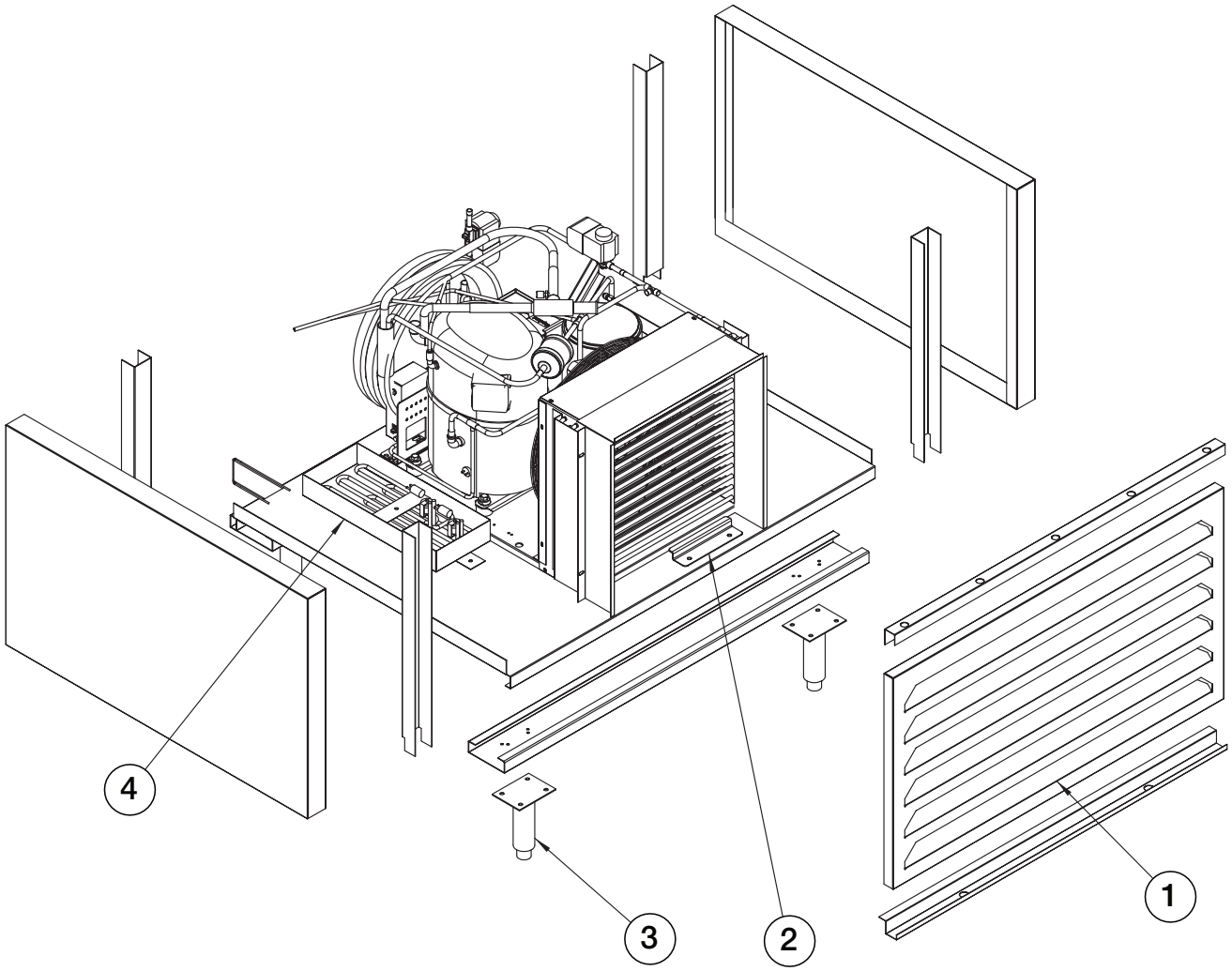
QC2-40 COMPRESSOR



Item	Part	Description	Qty.
1	VA-29898	Valve, Liquid Line Solenoid	2
2	SE-29897	Solenoid Valve & Coil, Danfoss, 120V	2
3	VA-29900	Valve, Sporlan Crankcase Pressure Regulator	1
4	FI-29899	Filter Drier	1
5	**	Fan Guard	1
6	**	Compressor	1
7	EL-29828	Element Condensate Pan, 115V 200W Evap. - 120V	1
	WI-35102	Element Condensate Pan, 115V 200W Evap. - 220V	1
8	PN-29903	Evaporator Pan, without Element	1
9	RE-29896	Condensing Unit, 1.5 HP 230V 1 Phase	1

**NOT AVAILABLE FROM FACTORY

QC2-40 COMPRESSOR HOUSING

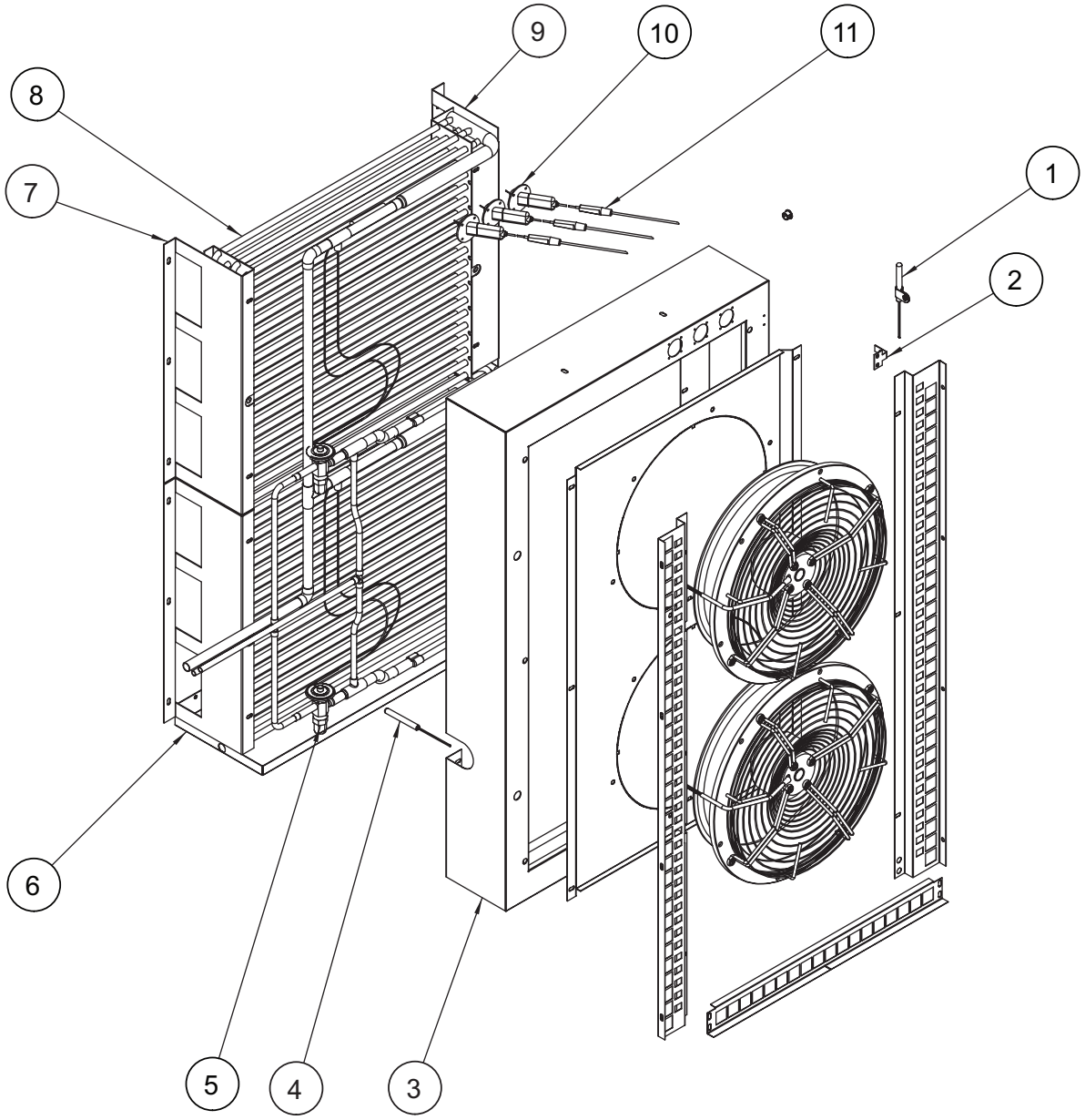


Item	Part	Description	Qty.
1	PE-36749	Compressor Louver	1
2	BT-29950	Hold Down Clip	2
3	5014889	Leg Assembly (Set of 4)	4
	LG-29904	Leg, 6"	1
	SC-29824	Bolt, 1/4" .20" x 5" Shoulder	4
	SC-29824	Leg Bolt, 1/4-20 x 3.5" Shoulder Bolt Hex Head	16
4	PN-29903	Evaporator Pan, without Element	1
5*	CD-35103	Cord and Plug, 125/250V 20 Amp 14-20P, 9' Long	1

*NOT SHOWN

PARTS INFORMATION

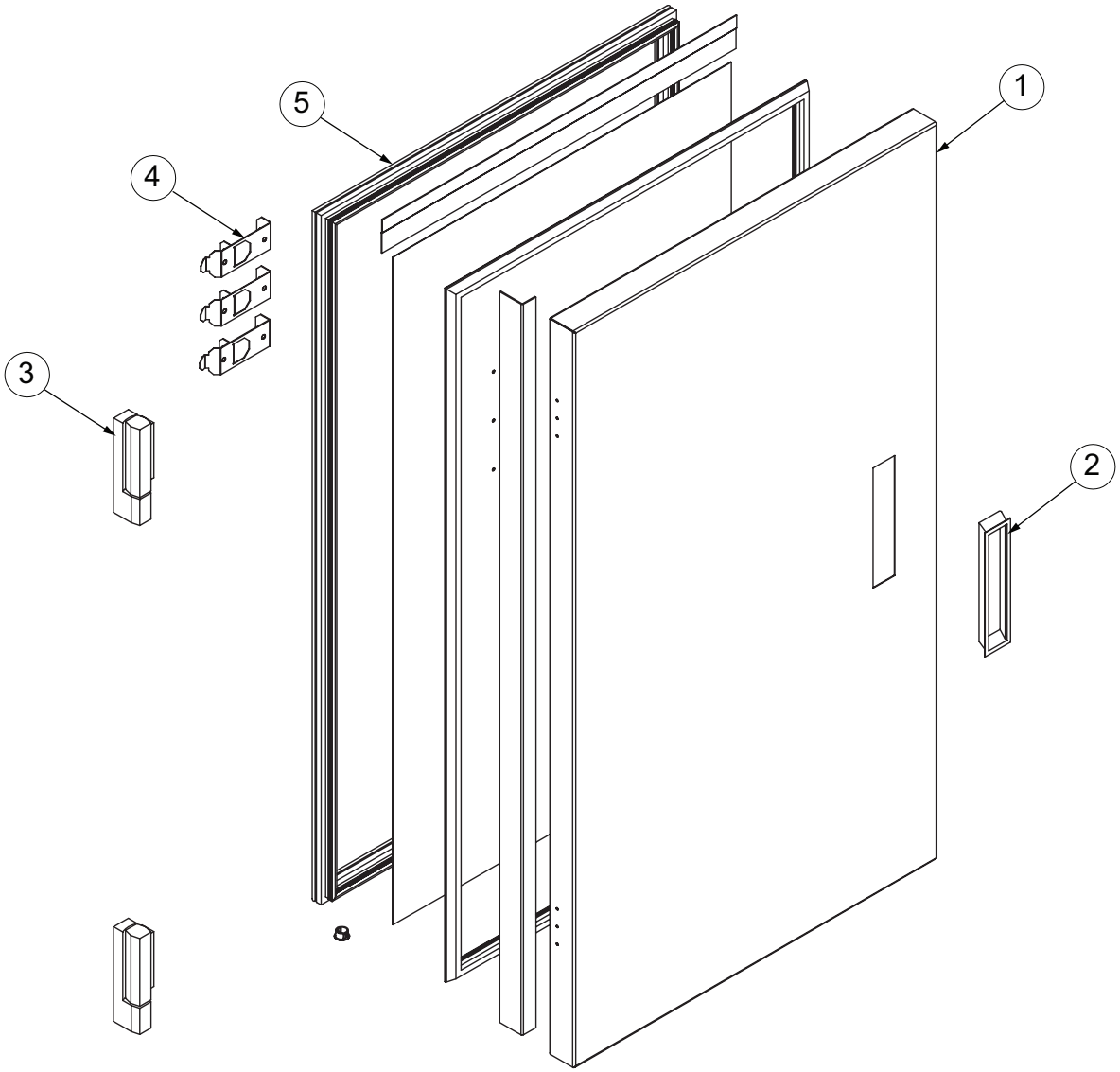
QC2-40 COIL



Item	Part	Description	Qty.
1	SN-33541	Air Sensor	1
2	**	Air Sensor Mounting Bracket	1
3	**	Housing, Refrigeration Enclosure	1
4	SN-34663	Coil Sensor/, Defrost/Sensor	1
5	VA-29906	Valve, Expansion	2
6	**	Drain Pan, Evaporator	1
7	**	Clip, Left, Coil	2
8	RE-29905	Evaporator Coil	2
9	**	Clip, Right, Coil	2
10	PR-35486	Probe Receptical	3
11	PR-35770	Probe	3

**NOT AVAILABLE FROM FACTORY

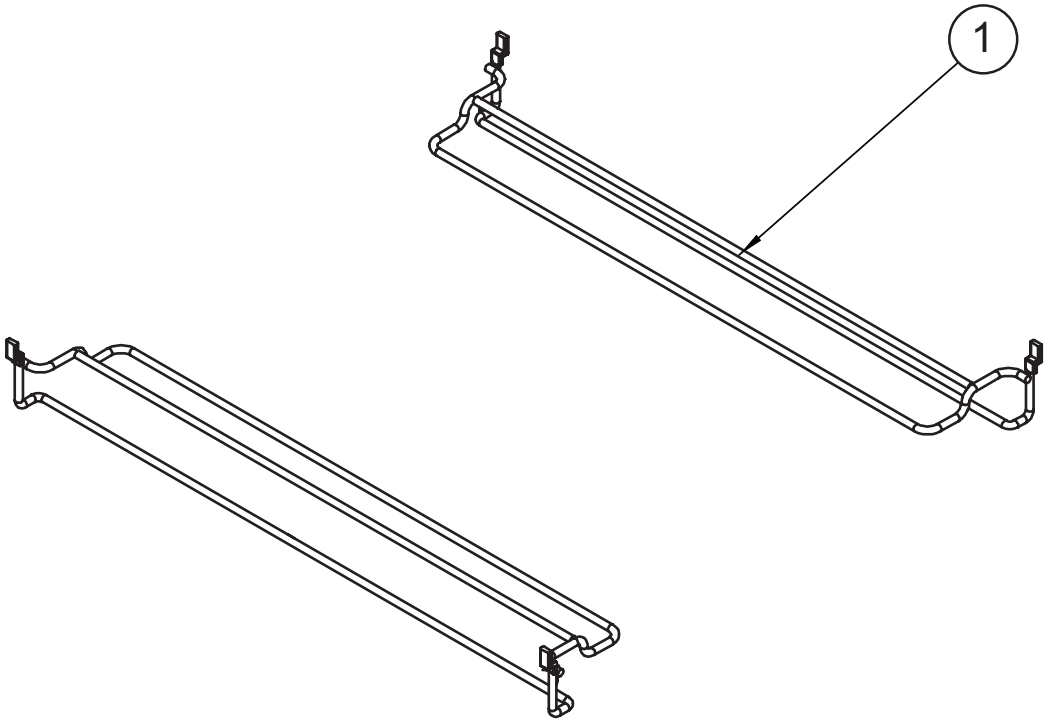
QC2-40 DOOR



Item	Part	Description	Qty.
1	DR-36748	Door Assembly, Left-Hand	1
	CONTACT FACTORY	Door Assembly, Right-Hand	1
2	HD-29958	Handle, Door	1
3	HG-36650	Hinge	1
4	HL-29840	Food Probe Holder	3
5	GS-29914	Gasket, Door	1

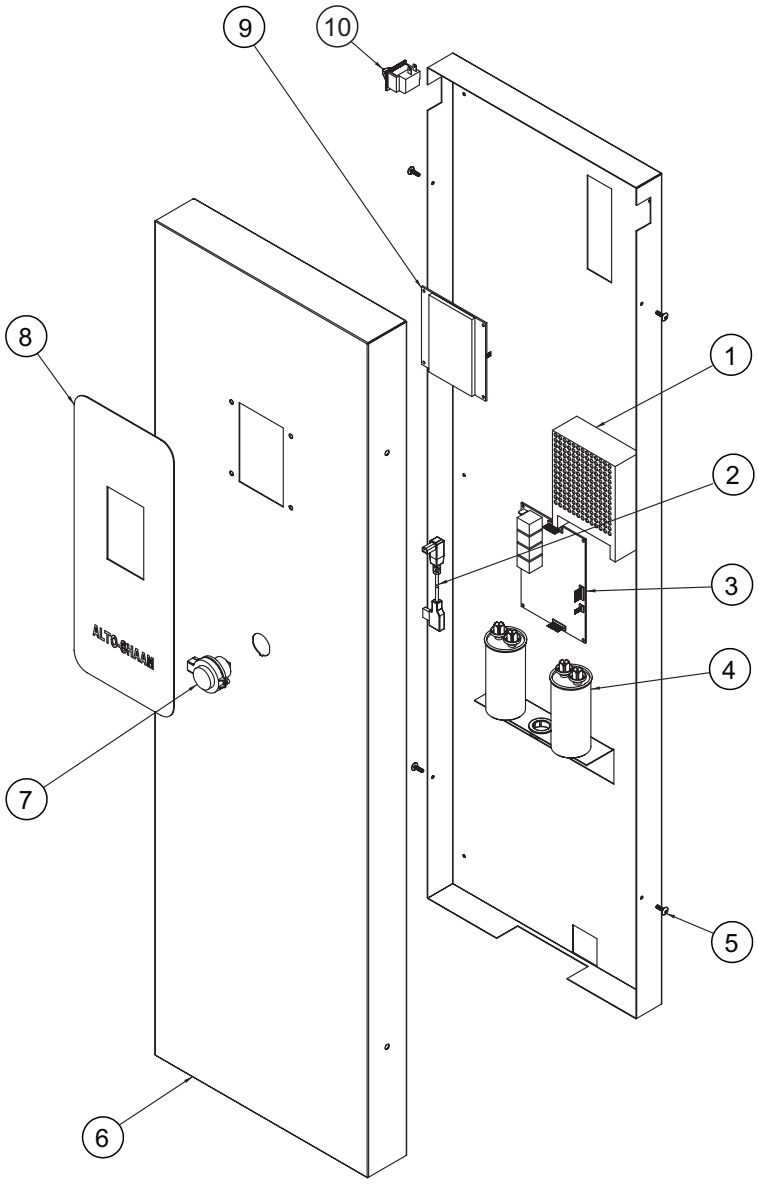
PARTS INFORMATION

QC2-40 PAN SUPPORTS



Item	Part	Description	Qty.
1	SR-36881	Rack, Pan Support	18

QC2-40 CONTROL PANEL

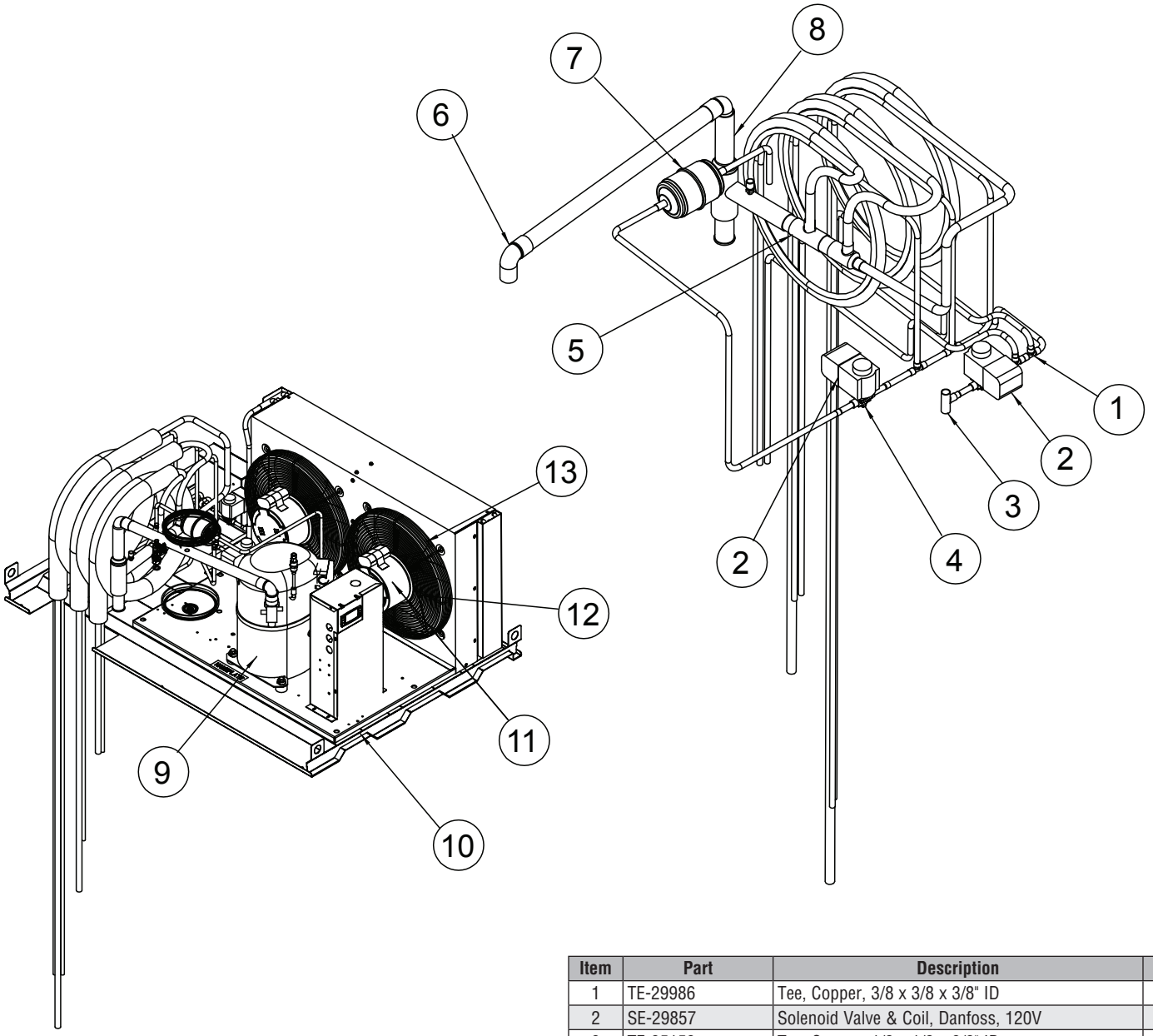


Item	Part	Description	Qty.
1	BA-29927	Power Supply Board, 115V-12VDC, 40W, 60C op Temp	1
2	CB-36571	USB Communication Cable w/ plug	1
3	CC-36419	Control Panel	1
4	CU-29964	Capacitor, 14MFD, 440VAC	2
5	SC-29991	Screw, 6-32 x 1/2 T/H/P 180-8 SS 08BC Phillips Truss SS	1
6	CC-29930	Control Panel Assembly, Left-Hand	1
	CONTACT FACTORY	Control Panel Assembly, Right-Hand	1
7	CB-35746	Connector, USB Panel Mount	1
8	PE-36160	Panel Overlay	1
9	CC-36418	User Interface Board and Firmware	1
10	SW-36882	Door Switch	1
11*	5017512	Beeper Assembly	1

*NOT SHOWN

PARTS INFORMATION

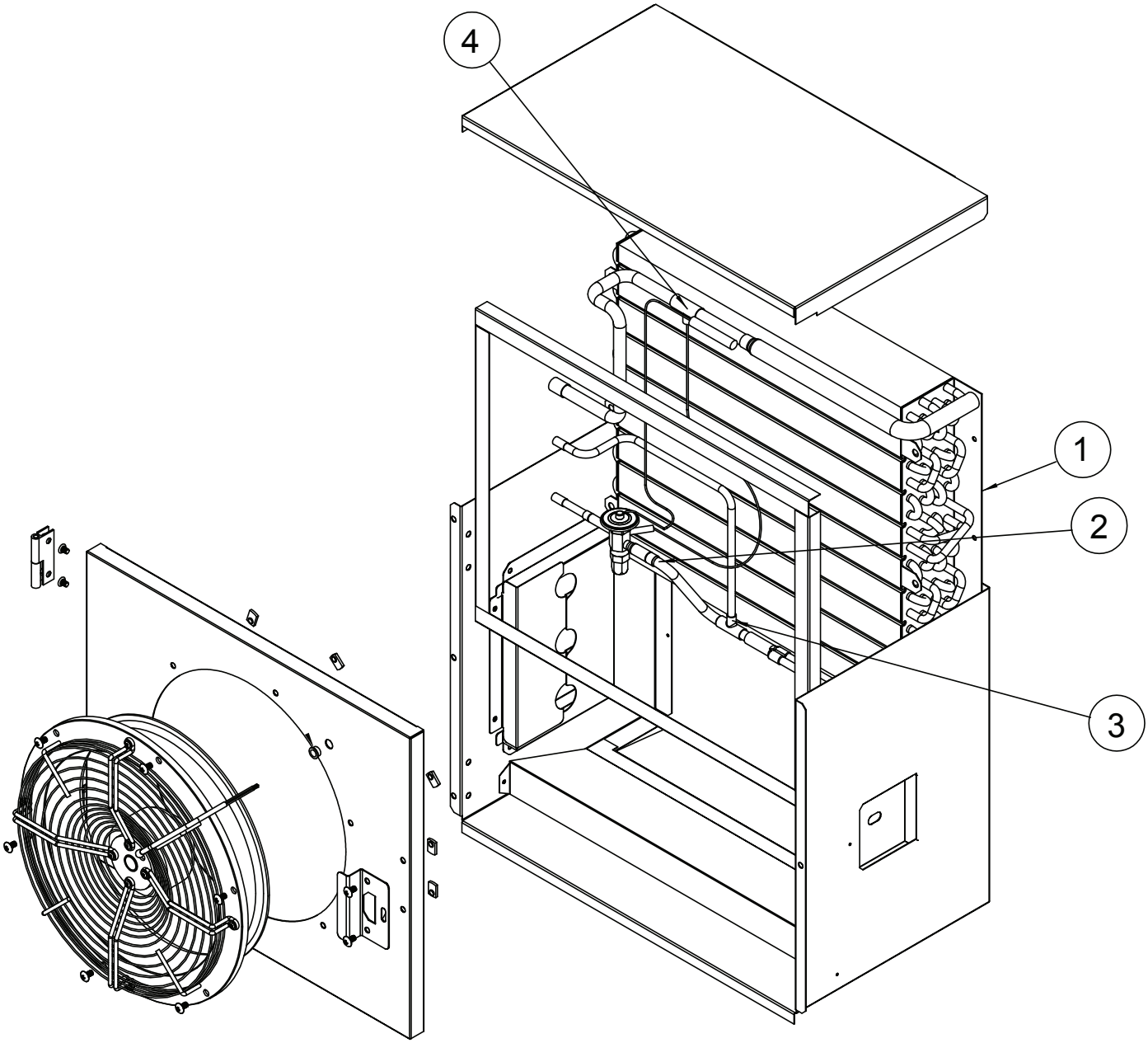
QC2-100 COMPRESSOR



Item	Part	Description	Qty.
1	TE-29986	Tee, Copper, 3/8 x 3/8 x 3/8" ID	4
2	SE-29857	Solenoid Valve & Coil, Danfoss, 120V	2
3	TE-35153	Tee, Copper, 1/2 x 1/2 x 3/8" ID	1
4	VA-29898	Valve, Liquid Line Solenoid	2
5	TE-35154	Tee, Copper, 1-1/8 x 1-1/8 x 5/8" OD	1
6	EL-35152	Elbow, Copper 1/4" Street	2
7	FI-29987	Filter Drier	1
8	VA-29988	CPR Valve	1
9	**	Compressor	1
10	RE-29983	Condensing Unit, 3HP 208/230V 1 Phase	1
	RE-35172	Condensing Unit, 3HP 208/230V 3 Phase	1
11	**	Condensor Fan Motor	1
12	**	Condensor Fan Blade	1
13	**	Condensor Fan Guard	1

**NOT AVAILABLE FROM FACTORY

QC2-100 COIL

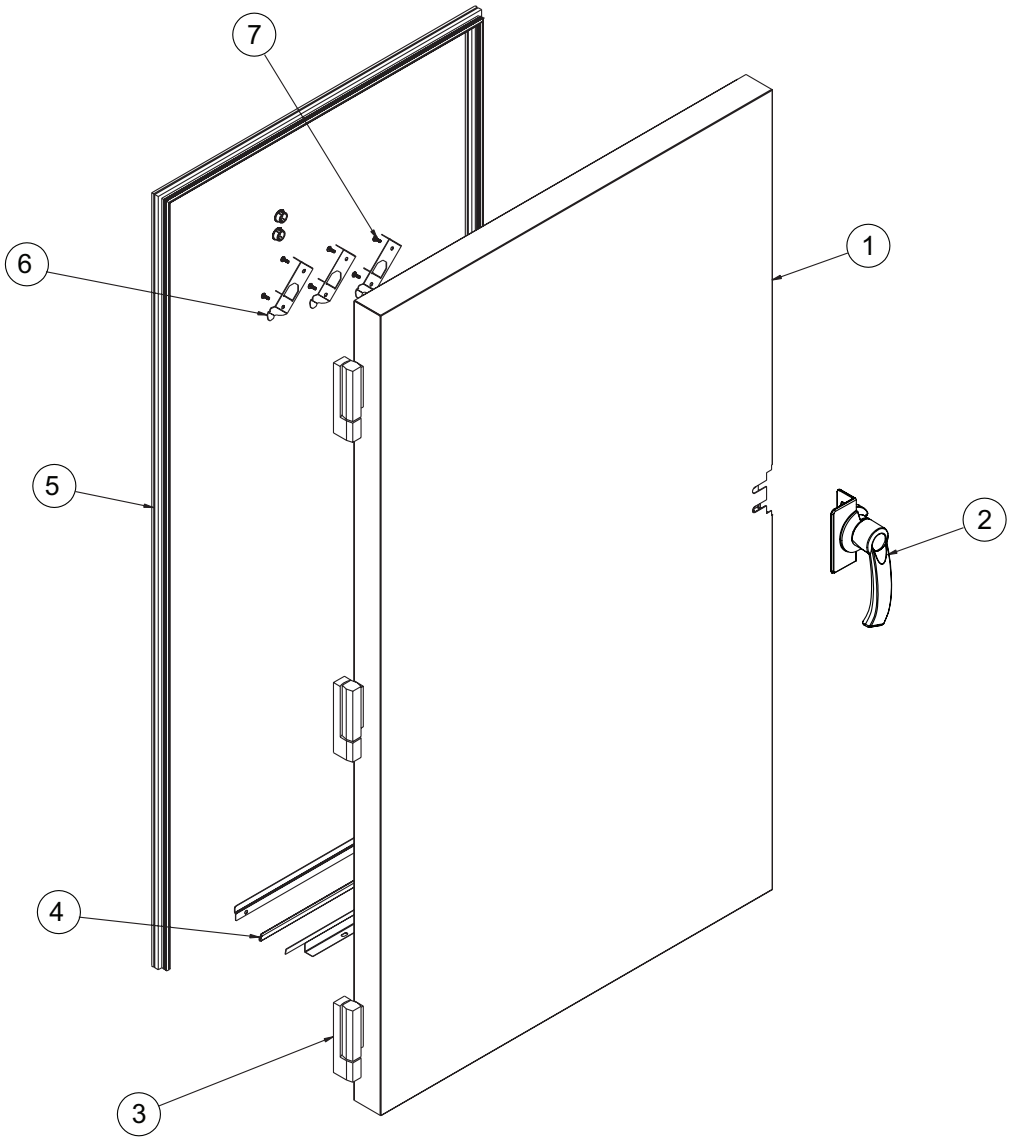


Item	Part	Description	Qty.
1	RE-29905	Coil Assembly, 19x20	3
2	VA-29906	Valve, Expansion	3
3	TE-35153	Tee, Copper, 1/2 x 1/2 x 3/8" ID	1
4	TE-29985	Tee, Copper, 1/2" x 1/2" x 1/4" ID	1
5*	FA-29945	Evaporator Fan Motor	3
6*	SN-34663	Coil Sensor, Defrost/Sensor	1

*NOT SHOWN

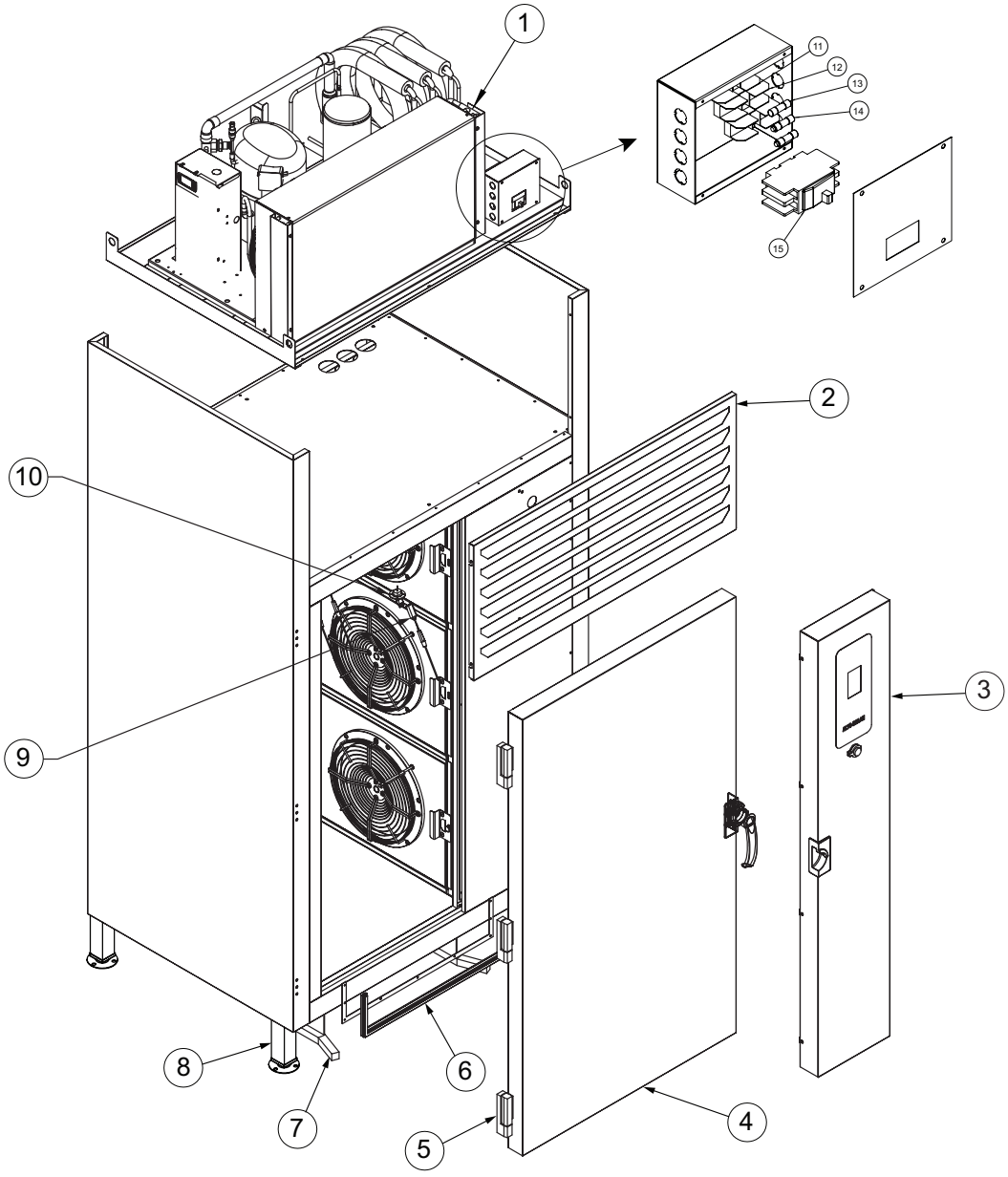
PARTS INFORMATION

QC2-100 DOOR



Item	Part	Description	Qty.
1	DR-29990	Door Assembly, Left-Hand	1
	CONTACT FACTORY	Door Assembly, Right-Hand	1
2	HD-26967	Handle, Door, LH	1
	HD-26966	Handle, Door, RH	1
3	HG-36650	Hinge, Adjustable	3
4	GS-29994	Gasket, Compression	1
5	GS-29993	Gasket, Door	1
6	HL-29840	Food Probe Holder	3
7	SC-29991	Bolt, 8-32 X 1/2, Phillips Truss	6

QC2-100 INTERIOR (LEFT-HAND DOOR SHOWN)



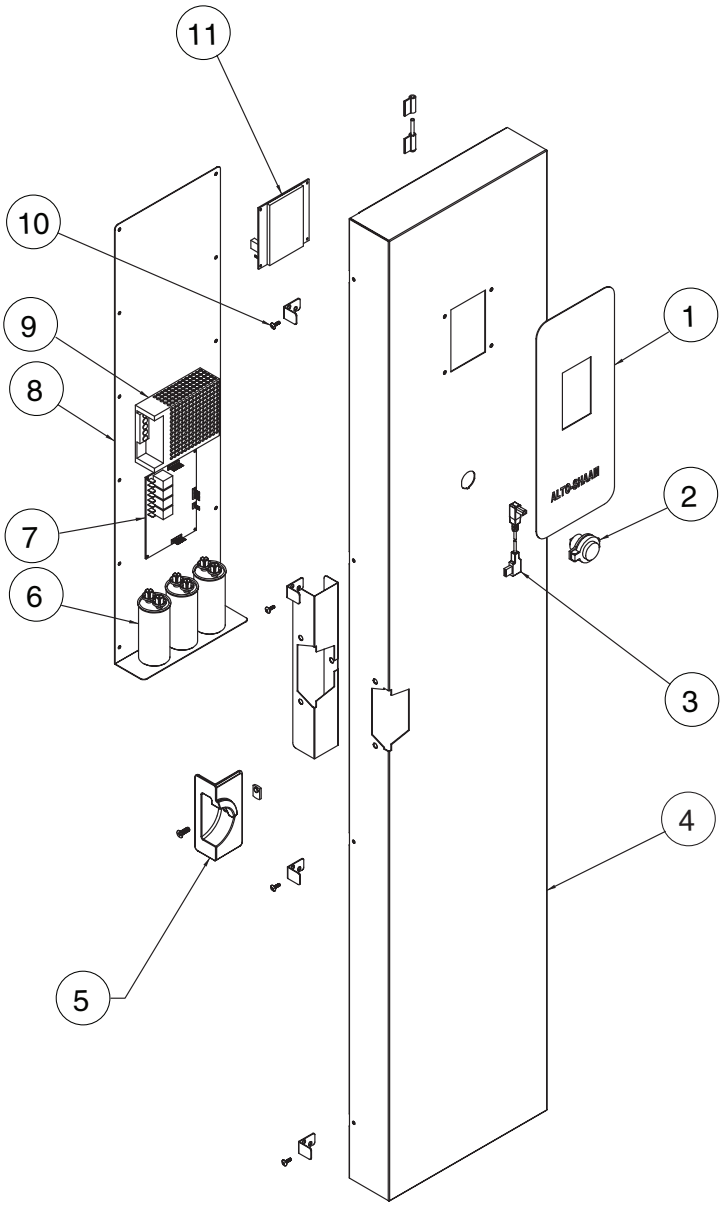
Item	Part	Description	Qty.
1	RE-29983	Condensing Unit, 3HP 208/230V 1 Phase	1
	RE-35172	Condensing Unit, 3HP 208/230V 3 Phase	1
2	PN-29842	Louver Panel	1
3	PN-29999	Panel, Control Panel Assembly, Left-Hand	1
	CONTACT FACTORY	Panel, Control Panel Assembly, Right-Hand	
4	DR-29990	Door Assembly, Left-Hand	1
	CONTACT FACTORY	Door Assembly, Right-Hand	
5	HG-36650	Hinge, Adjustable	3
6	GS-29994	Gasket, Compression	1
7	CONTACT FACTORY	Trolley Guides	1
8	5016746	Leg Assembly (Set of 4)	4
	LG-29904	Leg, 6"	1
	SC-29824	Bolt, 1/4" .20" x 5" Shoulder	4

Item	Part	Description	Qty.
9	PR-35770	Probe, Quick Connect	3
10	PR-35486	Probe, Receptacle	3
11	BK-29919	Block, Fuse Holder, 20A 300VAC	1
12	FU-29995	Block, Fuse Holder, 30A 600VAC	2
13	FU-29997	Fuse, 15A Time Delay SC-15 300V 3/4HP	1
14*	FU-29998	Fuse, 30A Time Delay CCMR-30 600VAC	2
15*	FU-29996	Breaker, 2 Pole, 30 Amp	1
16*	SH-22473	Shelf, Stainless Steel Wire	1
17*	SA-35079	Pre-Chill Strip	1
18*	SN-33541	Cavity Sensor	1

*NOT SHOWN

PARTS INFORMATION

QC2-100 CONTROL PANEL (LEFT-HAND SHOWN)



Item	Part	Description	Qty.
1	PE-36160	Panel Overlay	1
2	CB-35746	Connector, USB, Panel Mount	1
3	CB-35769	USB Communication Cable	1
4	PN-29999	Control Panel, Left-Hand	1
	CONTACT FACTORY	Control Panel, Right-Hand	1
5	LT-26968	Door Latch, Left-Hand	1
	LT-26969	Door Latch, Right-Hand	1
6	CU-29964	Capacitor, 14MFD, 440VAC	1
7	CC-36419	Control Board	1
8	PN-35934	Bracket, Fan Mounting	1
9	BA-29927	Power Supply, 115V-12VDC, 40 W, 60C Op Temp	1
10	SC-29991	Screw, 6-32x1/2 T/H/P 18-8 SS Phillips Truss	4
11	CC-36418	User Interface Board and Firmware	1
12*	5017512	Beeper Assembly	1

*NOT SHOWN

TRANSPORTATION DAMAGE and CLAIMS

All Alto-Shaam equipment is sold F.O.B. shipping point, and when accepted by the carrier, such shipments become the property of the consignee.

Should damage occur in shipment, it is a matter between the carrier and the consignee. In such cases, the carrier is assumed to be responsible for the safe delivery of the merchandise, unless negligence can be established on the part of the shipper.

1. Make an immediate inspection while the equipment is still in the truck or immediately after it is moved to the receiving area. Do not wait until after the material is moved to a storage area.
2. Do not sign a delivery receipt or a freight bill until you have made a proper count and inspection of all merchandise received.
3. Note all damage to packages directly on the carrier's delivery receipt.
4. Make certain the driver signs this receipt. If he refuses to sign, make a notation of this refusal on the receipt.
5. If the driver refuses to allow inspection, write the following on the delivery receipt:
   Driver refuses to allow inspection of containers for visible damage.
6. Telephone the carrier's office immediately upon finding damage, and request an inspection. Mail a written confirmation of the time, date, and the person called.
7. Save any packages and packing material for further inspection by the carrier.
8. Promptly file a written claim with the carrier and attach copies of all supporting paperwork.

We will continue our policy of assisting our customers in collecting claims which have been properly filed and actively pursued. We cannot, however, file any damage claims for you, assume the responsibility of any claims, or accept deductions in payment for such claims.

LIMITED WARRANTY

Alto-Shaam, Inc. warrants to the original purchaser only that any original part that is found to be defective in material or workmanship will, at Alto-Shaam's option, subject to provisions hereinafter stated, be replaced with a new or rebuilt part.

The original parts warranty period is as follows:

For the refrigeration compressor on Alto-Shaam Quickchillers™, five (5) years from the date of installation of appliance.

For the heating element on Halo Heat® cooking and holding ovens, as long as the original purchaser owns the oven. This excludes holding only equipment.

For all other original parts, one (1) year from the date of installation of appliance or fifteen (15) months from the shipping date, whichever occurs first.

The labor warranty period is one (1) year from the date of installation or fifteen (15) months from the shipping date, whichever occurs first.

Alto-Shaam will bear normal labor charges performed during standard business hours, excluding overtime, holiday rates or any additional fees.

To be valid, a warranty claim must be asserted during the applicable warranty period. This warranty is not transferable.

THIS WARRANTY DOES NOT APPLY TO:

1. Calibration.
2. Replacement of light bulbs, door gaskets, and/or the replacement of glass due to damage of any kind.
3. Equipment damage caused by accident, shipping, improper installation or alteration.
4. Equipment used under conditions of abuse, misuse, carelessness or abnormal conditions, including but not limited to, equipment subjected to harsh or inappropriate chemicals, including but not limited to, compounds containing chloride or quaternary salts, poor water quality, or equipment with missing or altered serial numbers.
5. Damage incurred as a direct result of poor water quality, inadequate maintenance of steam generators and/or surfaces affected by water quality. Water quality and required maintenance of steam generating equipment is the responsibility of the owner/operator.
6. Damage caused by use of any cleaning agent other than Alto-Shaam's Combitherm® Cleaner, including but not limited to damage due to chlorine or other harmful chemicals. **Use of Alto-Shaam's Combitherm® Cleaner on Combitherm® ovens is highly recommended.**
7. Any losses or damage resulting from malfunction, including loss of product, food product, revenue, or consequential or incidental damages of any kind.
8. Equipment modified in any manner from original model, substitution of parts other than factory authorized parts, removal of any parts including legs, or addition of any parts.

This warranty is exclusive and is in lieu of all other warranties, express or implied, including the implied warranties of merchantability and fitness for a particular purpose. In no event shall Alto-Shaam be liable for loss of use, loss of revenue or profit, or loss of product, or for any indirect, special, incidental, or consequential damages. No person except an officer of Alto-Shaam, Inc. is authorized to modify this warranty or to incur on behalf of Alto-Shaam any other obligation or liability in connection with Alto-Shaam equipment.

ALTO-SHAAM®

Effective November 1, 2012

RECORD THE MODEL AND SERIAL NUMBER OF THE APPLIANCE FOR EASY REFERENCE.
ALWAYS REFER TO BOTH MODEL AND SERIAL NUMBER IN ANY CONTACT WITH ALTO-SHAAM REGARDING THIS APPLIANCE.

Model: _____ Date Installed: _____
Voltage: _____ Purchased From: _____
Serial Number: _____

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